STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 163214

TO: Tamthom Truong **Location: rem/5B19/5C18** **Art Unit: 1624** **Friday, October 14, 2005** **Case Serial Number: 10/786650**	**From: Paul Schulwitz** **Location: Biotech-Chem Library** **REM-1A65** **Phone: 571-272-2527** **Paul.schulwitz@uspto.gov**

Search Notes

Examiner Truong,

Please review the attached search results.
If you have any questions or if you would like to refine the search query, please feel free to contact me at any time.

Thank you for using STIC search services!

Paul Schulwitz
Technical Information Specialist
REM-1A65
571-272-2527

STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact ***the searcher or contact:***

Mary Hale, Information Branch Supervisor
Remsen Bldg. 01 D86
571-272-2507

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1610*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-Biotech-Chem Library Remsen Bldg.

Application

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:707163 HCAPLUS
DOCUMENT NUMBER: 133:266869
ENTRY DATE: Entered STN: 06 Oct 2000
TITLE: Preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors.
INVENTOR(S): Oxford, Alexander William; Jack, David
PATENT ASSIGNEE(S): Vanguard Medica Ltd., UK
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C07D471-04
SECONDARY: A61K031-519; C07D498-04; A61K031-553; A61P011-00; C07D471-04; C07D239-00; C07D221-00; C07D498-04; C07D267-00; C07D239-00
CLASSIFICATION: 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058308	A1	20001005	WO 2000-GB1193	20000329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NZ 514158	A	20000329	NZ 2000-514158	20000329
CA 2368413	AA	20001005	CA 2000-2368413	20000329
AU 2000041274	A5	20001016	AU 2000-41274	20000329
AU 773504	B2	20040527		
EP 1165558	A1	20020102	EP 2000-920857	20000329
EP 1165558	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000009446	A	20020115	BR 2000-9446	20000329
JP 2002540207	T2	20021126	JP 2000-608010	20000329
AT 250602	E	20031015	AT 2000-920857	20000329
PT 1165558	T	20040227	PT 2000-920857	20000329
ES 2208310	T3	20040616	ES 2000-920857	20000329
US 2003036542	A1	20030220	US 2001-964260	20010926
US 6794391	B2	20040921		
NO 2001004728	A	20011123	NO 2001-4728	20010928
US 2004171828	A1	20040902	US 2004-786650	20040224 <--
US 2004176353	A1	20040909	US 2004-786400	20040224

PRIORITY APPLN. INFO.:

GB 1999-7454	A	19990331
GB 1999-9802	A	19990428
WO 2000-GB1193	W	20000329
US 2001-964260	A3	20010926

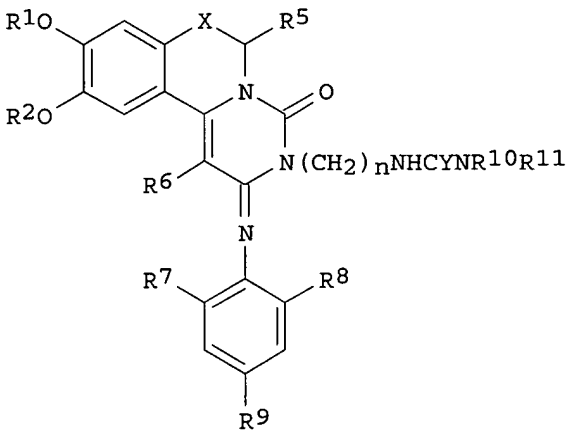
PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

WO 2000058308	ICM	C07D471-04
	ICS	A61K031-519; C07D498-04; A61K031-553; A61P011-00; C07D471-04; C07D239-00; C07D221-00; C07D498-04; C07D267-00; C07D239-00
WO 2000058308	ECLA	C07D471/04+239C+221C
US 2003036542	NCL	514/211.120
	ECLA	C07D471/04+239C+221C
US 2004171828	NCL	540/548.000
	ECLA	C07D471/04+239C+221C <--
US 2004176353	NCL	514/211.120
	ECLA	C07D471/04+239C+221C

OTHER SOURCE(S): MARPAT 133:266869

GRAPHIC IMAGE:



I

ABSTRACT:
Title compds. [I; R1, R2 = alkyl, acyl; R5 = H, alkyl, alkenyl, alkynyl; R6 = H, alkyl, alkenyl, alkynyl, amino, alkylamino, dialkylamino, acylamino; R7, R8 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; R9 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; X = OCH2, CR3R4; R3, R4 = H, alkyl; R10, R11 = H, alkyl, cycloalkyl, Ph; Y = O, CHNO2, NCN, NH, NNO2; n = 2-4], were prepared I have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3-methyl-2-mesitylimino-2,3,6,7-tetrahydro-4H--pyrimido[6,1-a]isoquinolin-4-one) and do not have trequinsin's very bitter taste. Thus, Na cyanate was added dropwise to 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one (preparation given) in aqueous
HCl at 80° followed by stirring for 2 h to give 54% 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(N-carbamoyl-2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one(II). II inhibited PDE3 with IC50 = 0.46 μM and was tasteless.

SUPPL. TERM: aryliminopyrimidoisoquinolinone prepn phosphodiesterase inhibitor; pyrimidoisoquinolinone arylimino prepn phosphodiesterase inhibitor; chronic obstructive pulmonary disease treatment aryliminopyrimidoisoquinolinone prepn; antiasthmatic aryliminopyrimidoisoquinolinone prepn; bronchodilator aryliminopyrimidoisoquinolinone prepn

INDEX TERM: Lung, disease
(chronic obstructive, treatment; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Antiasthmatics
Bronchodilators
Cytotoxic agents
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Proliferation inhibition
(proliferation inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Tumor necrosis factors
ROLE: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(release inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **9036-21-9**, Phosphodiesterase III
ROLE: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **298680-25-8P 298680-26-9P**
298680-27-0P 298680-28-1P
298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P
298680-33-8P 298680-34-9P
298680-35-0P 298680-36-1P
298680-37-2P
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **62-56-6**, Thiourea, reactions **75-31-0**, Isopropylamine, reactions **88-05-1**, 2,4,6-Trimethylaniline **95-53-4**, 2-Methylaniline, reactions **103-71-9**, Phenyl isocyanate, reactions **574-98-1**, N-(2-Bromoethyl)phthalimide **1795-48-8**, Isopropyl isocyanate **2260-00-6** **3173-53-3**, Cyclohexyl isocyanate **5394-18-3**, N-(4-Bromobutyl)phthalimide **10191-60-3**, Dimethyl N-cyanodithioiminocarbonate **13623-94-4** **24544-04-5**, 2,6-Diisopropylaniline **61832-41-5 298680-49-6**
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **2986-25-6P 75535-96-5P 76536-66-8P**
145013-05-4P 214358-62-0P
298680-38-3P 298680-39-4P
298680-40-7P 298680-41-8P
298680-42-9P 298680-43-0P
298680-44-1P 298680-45-2P
298680-46-3P 298680-47-4P

298680-48-5P 298680-50-9P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Bansai, L; JOURNAL OF MEDICINAL CHEMISTRY 1984, V27(11), P1470

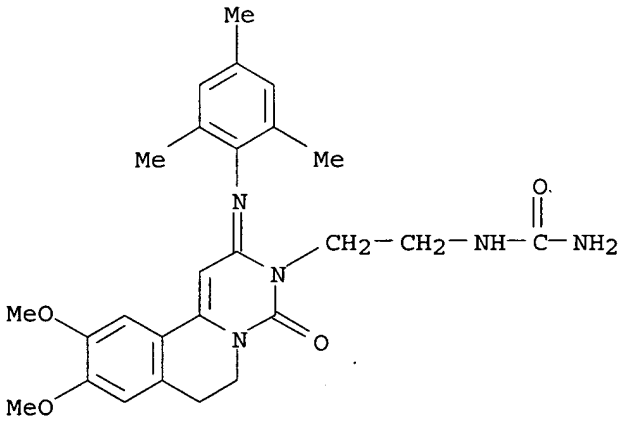
IT **9036-21-9**, Phosphodiesterase III
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

RN 9036-21-9 HCAPLUS
CN Phosphodiesterase, adenosine cyclic 3',5'-phosphate (9CI) (CA INDEX NAME)

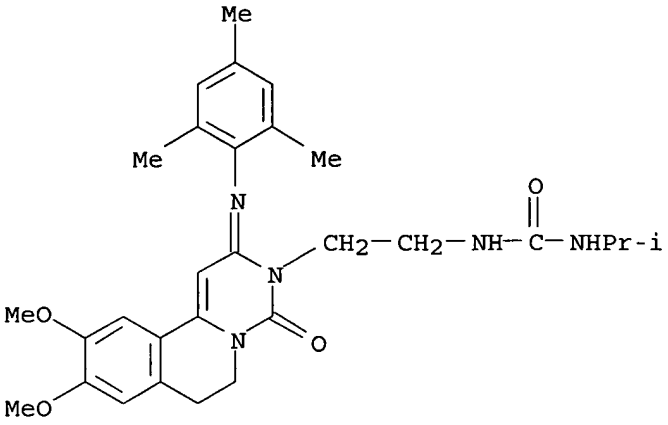
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

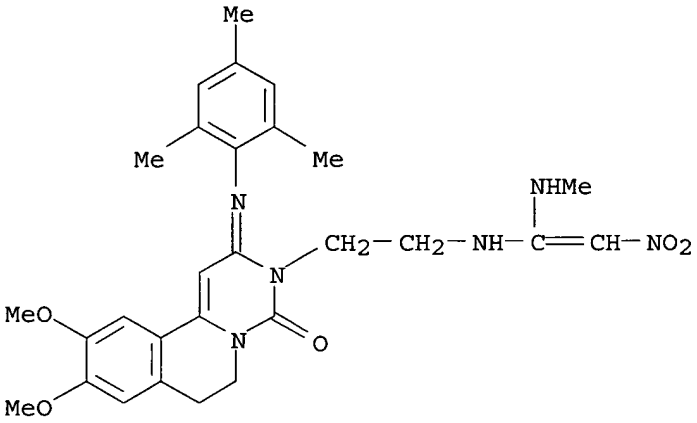
RN 298680-25-8 HCAPLUS
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



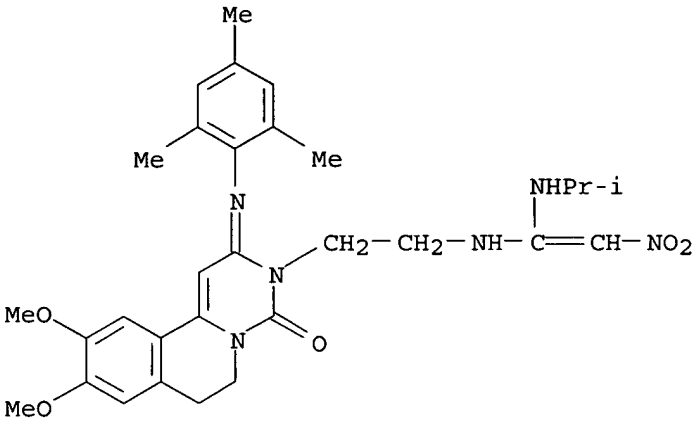
RN 298680-26-9 HCAPLUS
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



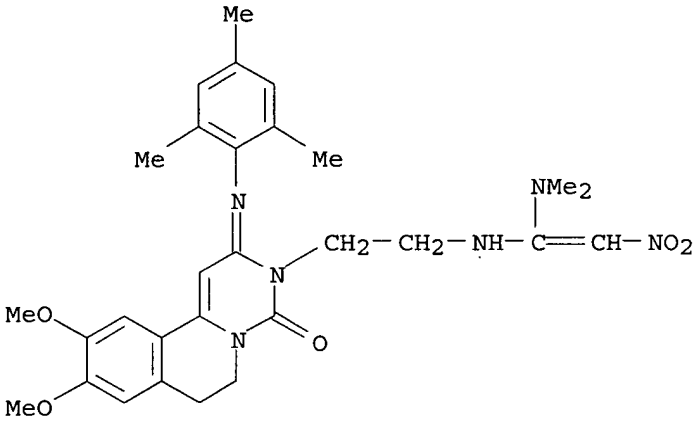
RN 298680-27-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-28-1 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-29-2 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



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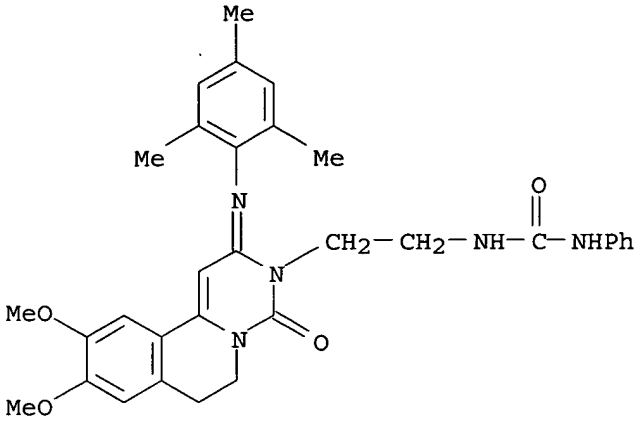
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



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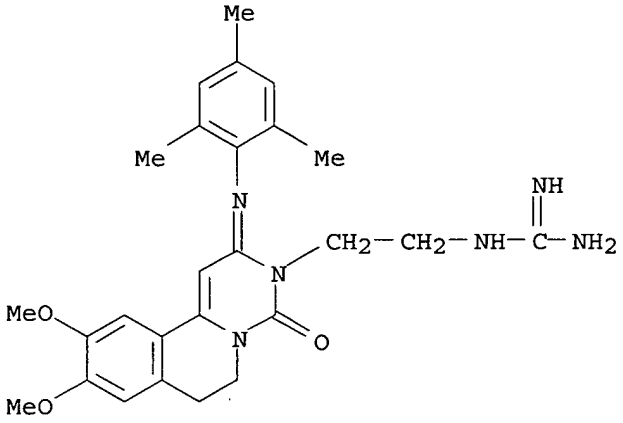
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-(9CI) (CA INDEX NAME)



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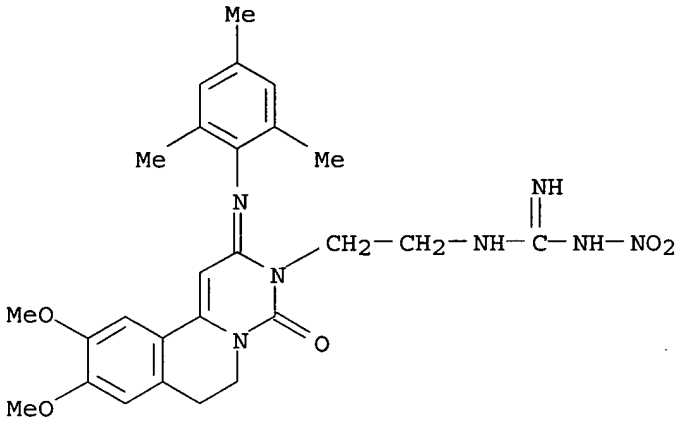
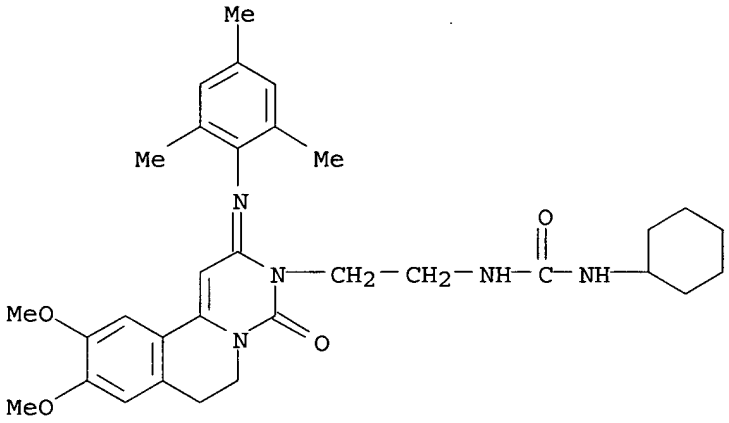
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



RN 298680-33-8 HCAPLUS
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



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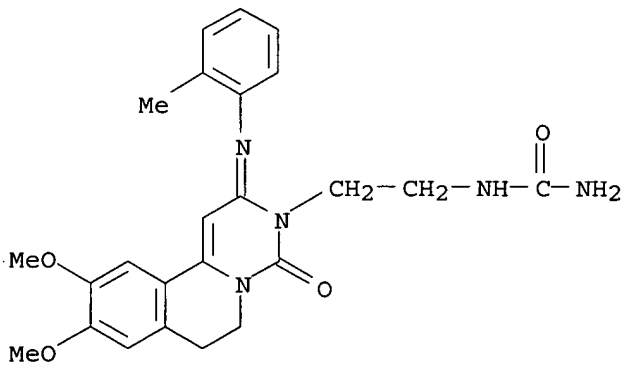
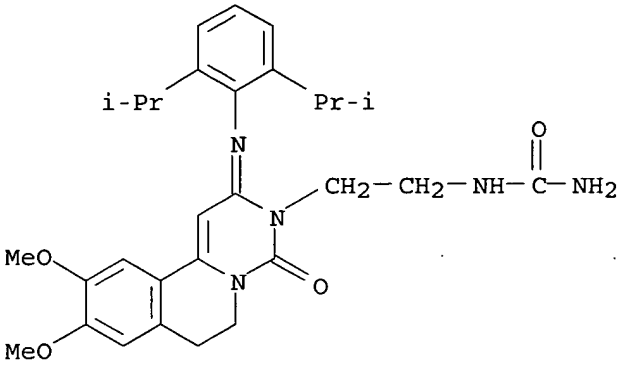


RN 298680-35-0 HCAPLUS
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



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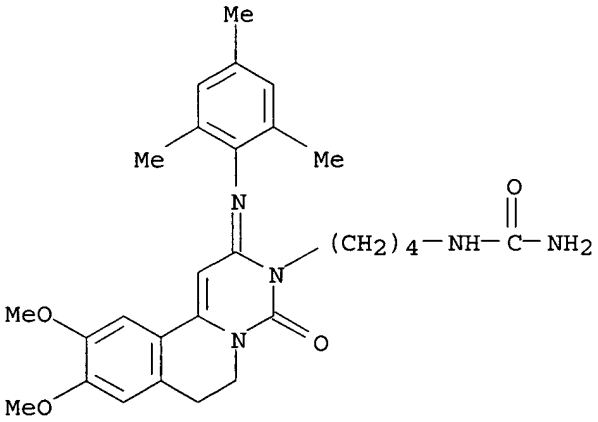
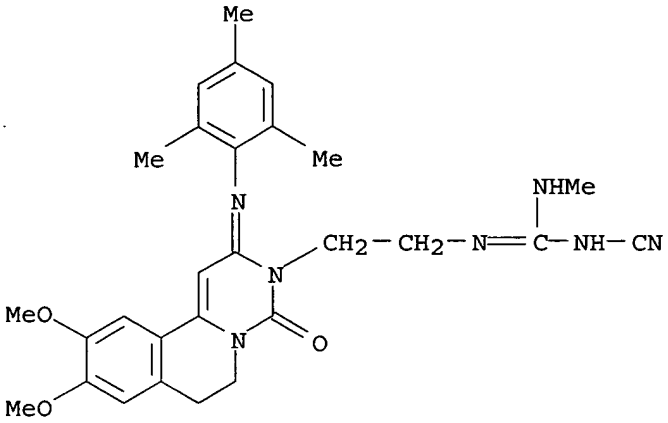
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)

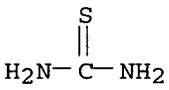


RN 298680-37-2 HCAPLUS
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)



IT **62-56-6**, Thiourea, reactions **75-31-0**, Isopropylamine, reactions **88-05-1**, 2,4,6-Trimethylaniline **95-53-4**, 2-Methylaniline, reactions **103-71-9**, Phenyl isocyanate, reactions **574-98-1**, N-(2-Bromoethyl)phthalimide **1795-48-8**, Isopropyl isocyanate **2260-00-6** **3173-53-3**, Cyclohexyl isocyanate **5394-18-3**, N-(4-Bromobutyl)phthalimide **10191-60-3**, Dimethyl N-cyanodithioiminocarbonate **13623-94-4** **24544-04-5**, 2,6-Diisopropylaniline **61832-41-5** **298680-49-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

RN 62-56-6 HCAPLUS
CN Thiourea (9CI) (CA INDEX NAME)



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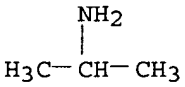
CN 2-Propanamine (9CI) (CA INDEX NAME)



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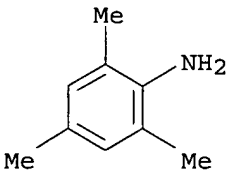

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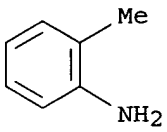
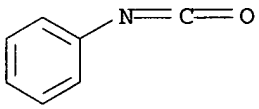
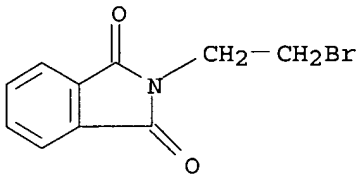


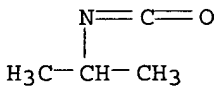
RN 103-71-9 HCAPLUS
CN Benzene, isocyanato- (9CI) (CA INDEX NAME)



RN 574-98-1 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)



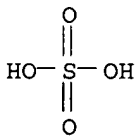
RN 1795-48-8 HCAPLUS
CN Propane, 2-isocyanato- (9CI) (CA INDEX NAME)



RN 2260-00-6 HCAPLUS
CN Carbamimidothioic acid, methyl ester, sulfate (9CI) (CA INDEX NAME)

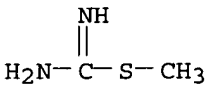
CM 1

CRN 7664-93-9
CMF H2 O4 S

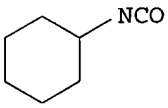


CM 2

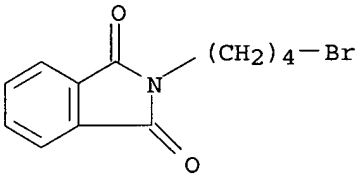
CRN 2986-19-8
CMF C2 H6 N2 S



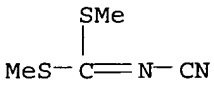
RN 3173-53-3 HCAPLUS
CN Cyclohexane, isocyanato- (9CI) (CA INDEX NAME)



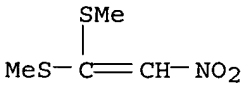
RN 5394-18-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-(4-bromobutyl)- (9CI) (CA INDEX NAME)



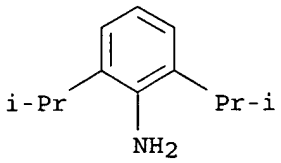
RN 10191-60-3 HCAPLUS
CN Carbonimidodithioic acid, cyano-, dimethyl ester (9CI) (CA INDEX NAME)



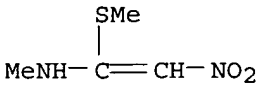
RN 13623-94-4 HCAPLUS
CN Ethene, 1,1-bis(methylthio)-2-nitro- (9CI) (CA INDEX NAME)



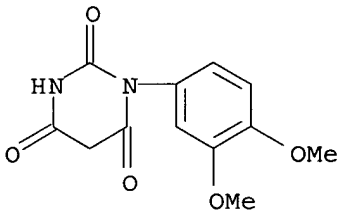
RN 24544-04-5 HCAPLUS
CN Benzenamine, 2,6-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 61832-41-5 HCAPLUS
CN Ethenamine, N-methyl-1-(methylthio)-2-nitro- (9CI) (CA INDEX NAME)



RN 298680-49-6 HCAPLUS
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 1-(3,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)



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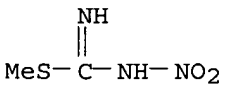
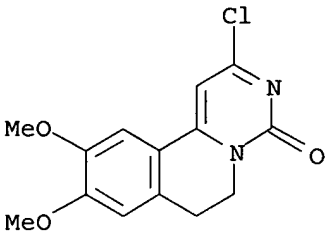
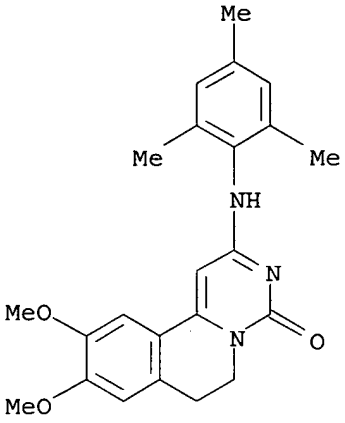
145013-05-4P 214358-62-0P 298680-38-3P
298680-39-4P 298680-40-7P 298680-41-8P
298680-42-9P 298680-43-0P 298680-44-1P
298680-45-2P 298680-46-3P 298680-47-4P
298680-48-5P 298680-50-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 2986-25-6 HCAPLUS
CN Carbamimidothioic acid, nitro-, methyl ester (9CI) (CA INDEX NAME)



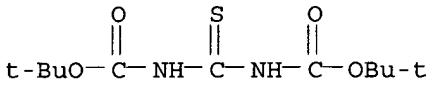
RN 75535-96-5 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2-chloro-6,7-dihydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)



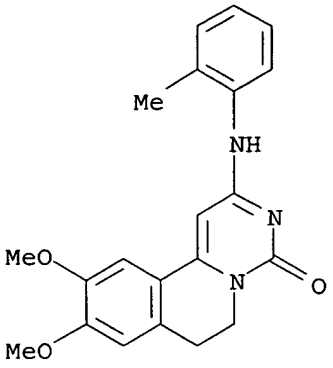
RN 76536-66-8 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 6,7-dihydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)amino]- (9CI) (CA INDEX NAME)



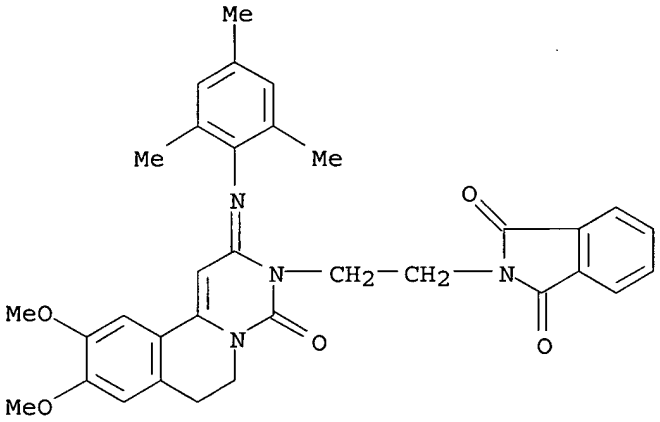
RN 145013-05-4 HCAPLUS
CN Carbamic acid, carbonothioylbis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



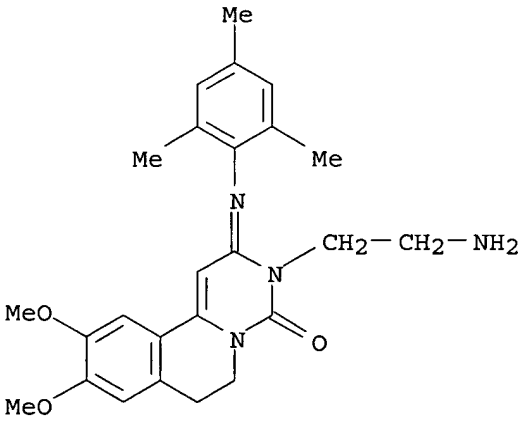
RN 214358-62-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)amino]- (9CI) (CA INDEX NAME)



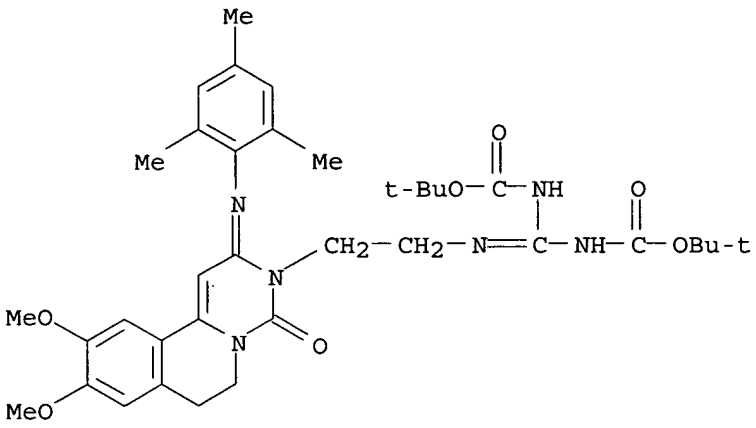
RN 298680-38-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



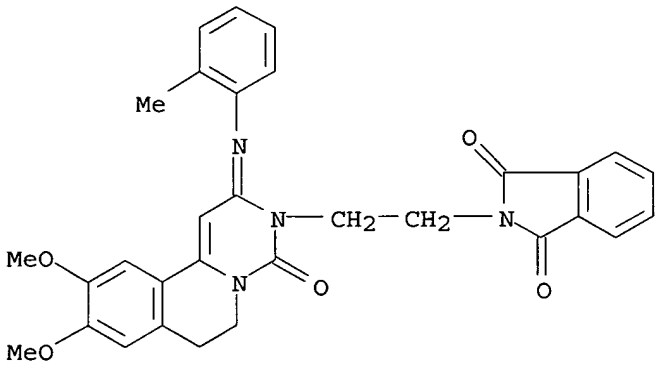
RN 298680-39-4 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



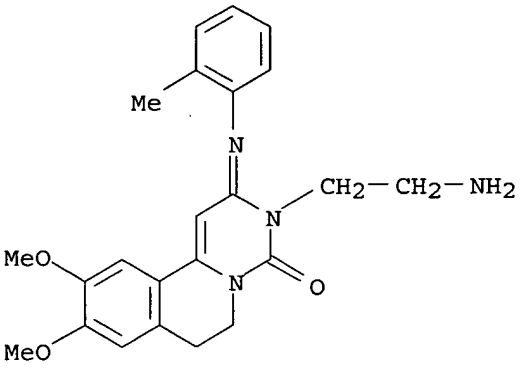
RN 298680-40-7 HCAPLUS
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



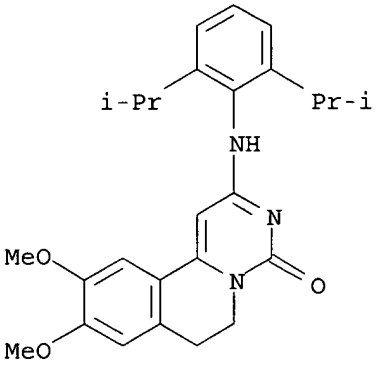
RN 298680-41-8 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



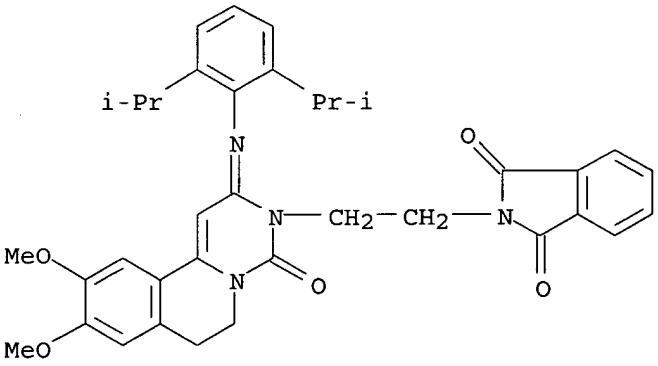
RN 298680-42-9 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-43-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2-[[2,6-bis(1-methylethyl)phenyl]amino]-6,7-dihydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)

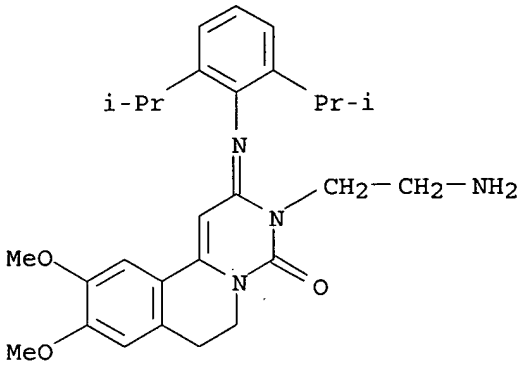


RN 298680-44-1 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

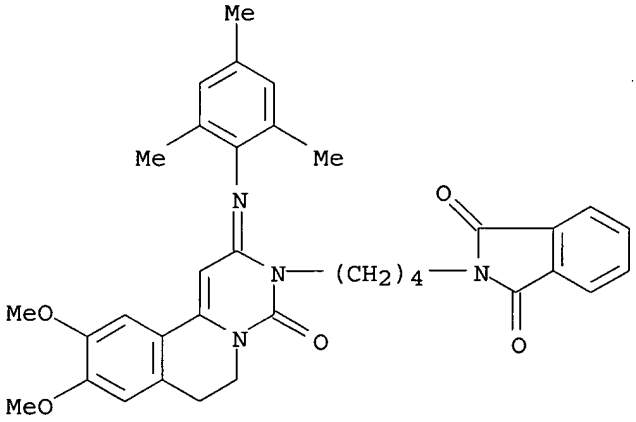


RN 298680-45-2 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2-[[2,6-bis(1-

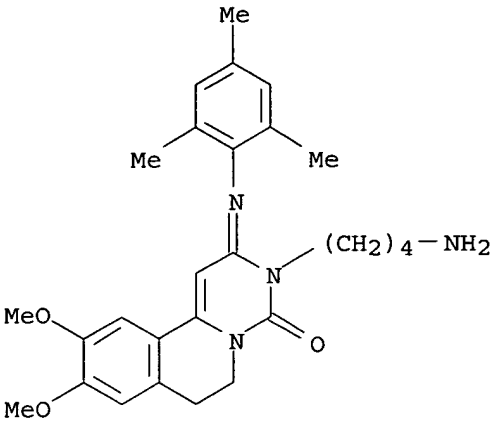
methylethyl)phenyl]imino]-2,3,6,7-tetrahydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)



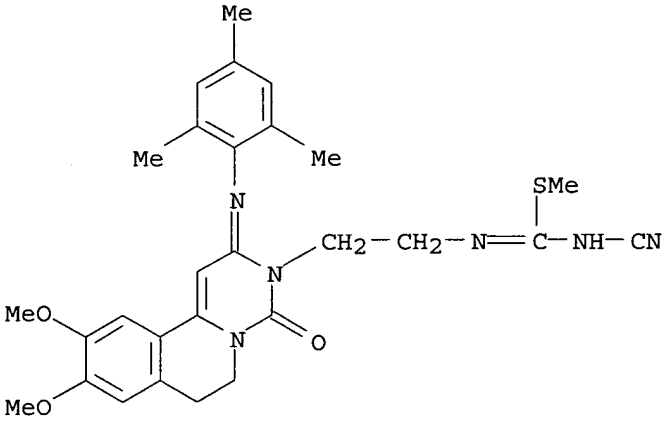
RN 298680-46-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



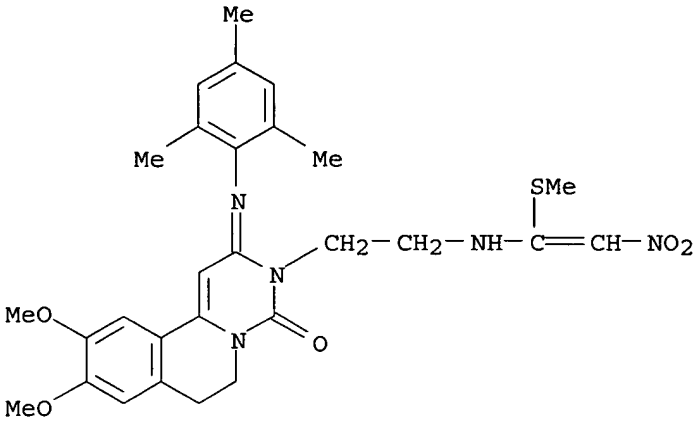
RN 298680-47-4 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(4-aminobutyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-48-5 HCAPLUS
CN Carbamimidothioic acid, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 298680-50-9 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylthio)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)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ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:707163 HCAPLUS
DOCUMENT NUMBER: 133:266869
ENTRY DATE: Entered STN: 06 Oct 2000
TITLE: Preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors.
INVENTOR(S): Oxford, Alexander William; Jack, David
PATENT ASSIGNEE(S): Vanguard Medica Ltd., UK
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C07D471-04
SECONDARY: A61K031-519; C07D498-04; A61K031-553; A61P011-00; C07D471-04; C07D239-00; C07D221-00; C07D498-04; C07D267-00; C07D239-00
CLASSIFICATION: 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058308	A1	20001005	WO 2000-GB1193	20000329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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CA 2368413	AA	20001005	CA 2000-2368413	20000329
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AU 773504	B2	20040527		
EP 1165558	A1	20020102	EP 2000-920857	20000329
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JP 2002540207	T2	20021126	JP 2000-608010	20000329
AT 250602	E	20031015	AT 2000-920857	20000329
PT 1165558	T	20040227	PT 2000-920857	20000329
ES 2208310	T3	20040616	ES 2000-920857	20000329
US 2003036542	A1	20030220	US 2001-964260	20010926
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NO 2001004728	A	20011123	NO 2001-4728	20010928
US 2004171828	A1	20040902	US 2004-786650	20040224 <--
US 2004176353	A1	20040909	US 2004-786400	20040224

PRIORITY APPLN. INFO.:

GB 1999-7454	A	19990331
GB 1999-9802	A	19990428
WO 2000-GB1193	W	20000329
US 2001-964260	A3	20010926

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

WO 2000058308	ICM	C07D471-04
	ICS	A61K031-519; C07D498-04; A61K031-553; A61P011-00; C07D471-04; C07D239-00; C07D221-00; C07D498-04; C07D267-00; C07D239-00
WO 2000058308	ECLA	C07D471/04+239C+221C
US 2003036542	NCL	514/211.120
	ECLA	C07D471/04+239C+221C
US 2004171828	NCL	540/548.000
	ECLA	C07D471/04+239C+221C <--
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	ECLA	C07D471/04+239C+221C

OTHER SOURCE(S): MARPAT 133:266869

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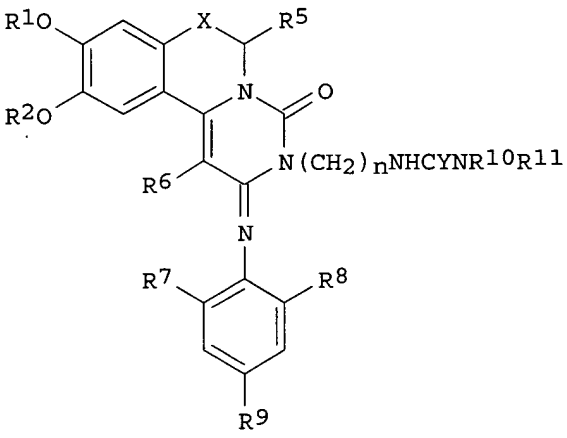


I

ABSTRACT:
Title compds. [I; R1, R2 = alkyl, acyl; R5 = H, alkyl, alkenyl, alkynyl; R6 = H, alkyl, alkenyl, alkynyl, amino, alkylamino, dialkylamino, acylamino; R7, R8 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; R9 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; X = OCH2, CR3R4; R3, R4 = H, alkyl; R10, R11 = H, alkyl, cycloalkyl, Ph; Y = O, CHNO2, NCN, NH, NNO2; n = 2-4], were prepared I have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3-methyl-2-mesitylimino-2,3,6,7-tetrahydro-4H--pyrimido[6,1-a]isoquinolin-4-one) and do not have trequinsin's very bitter taste. Thus, Na cyanate was added dropwise to 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one (preparation given) in aqueous
HCl at 80° followed by stirring for 2 h to give 54% 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(N-carbamoyl-2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one(II). II inhibited PDE3 with IC50 = 0.46 μM and was tasteless.

SUPPL. TERM: aryliminopyrimidoisoquinolinone prepn phosphodiesterase inhibitor; pyrimidoisoquinolinone arylimino prepn phosphodiesterase inhibitor; chronic obstructive pulmonary disease treatment aryliminopyrimidoisoquinolinone prepn; antiasthmatic aryliminopyrimidoisoquinolinone prepn; bronchodilator aryliminopyrimidoisoquinolinone prepn

INDEX TERM: Lung, disease
(chronic obstructive, treatment; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Antiasthmatics
Bronchodilators
Cytotoxic agents
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Proliferation inhibition
(proliferation inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: Tumor necrosis factors
ROLE: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(release inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **9036-21-9**, Phosphodiesterase III
ROLE: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **298680-25-8P 298680-26-9P**
298680-27-0P 298680-28-1P
298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P
298680-33-8P 298680-34-9P
298680-35-0P 298680-36-1P
298680-37-2P
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **62-56-6**, Thiourea, reactions **75-31-0**, Isopropylamine, reactions **88-05-1**, 2,4,6-Trimethylaniline **95-53-4**, 2-Methylaniline, reactions **103-71-9**, Phenyl isocyanate, reactions **574-98-1**, N-(2-Bromoethyl)phthalimide **1795-48-8**, Isopropyl isocyanate **2260-00-6** **3173-53-3**, Cyclohexyl isocyanate **5394-18-3** , N-(4-Bromobutyl)phthalimide **10191-60-3**, Dimethyl N-cyanodithioiminocarbonate **13623-94-4** **24544-04-5**, 2,6-Diisopropylaniline **61832-41-5 298680-49-6**
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

INDEX TERM: **2986-25-6P 75535-96-5P 76536-66-8P**
145013-05-4P 214358-62-0P
298680-38-3P 298680-39-4P
298680-40-7P 298680-41-8P
298680-42-9P 298680-43-0P
298680-44-1P 298680-45-2P
298680-46-3P 298680-47-4P

298680-48-5P 298680-50-9P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Bansai, L; JOURNAL OF MEDICINAL CHEMISTRY 1984, V27(11), P1470

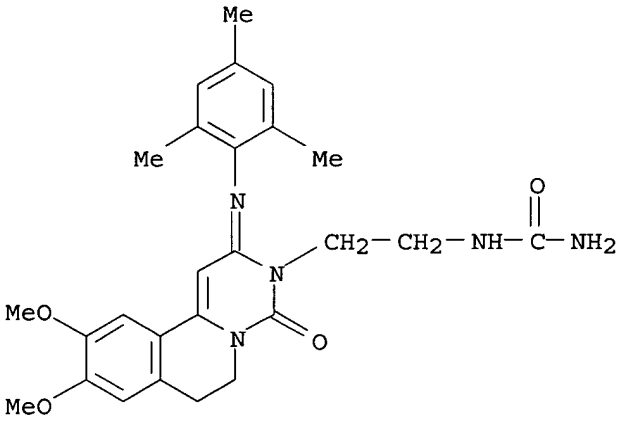
IT **9036-21-9**, Phosphodiesterase III
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

RN 9036-21-9 HCAPLUS
CN Phosphodiesterase, adenosine cyclic 3',5'-phosphate (9CI) (CA INDEX NAME)

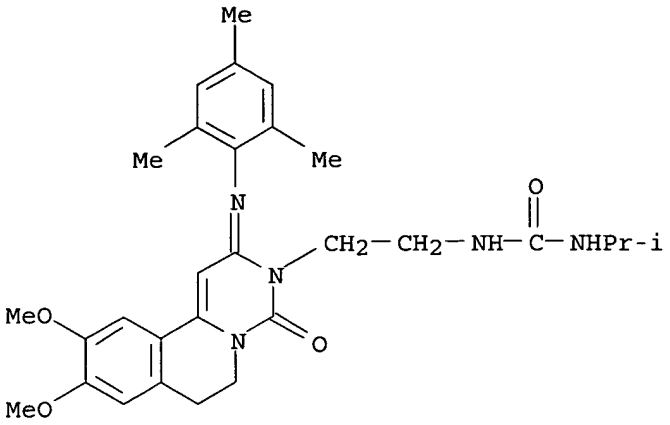
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

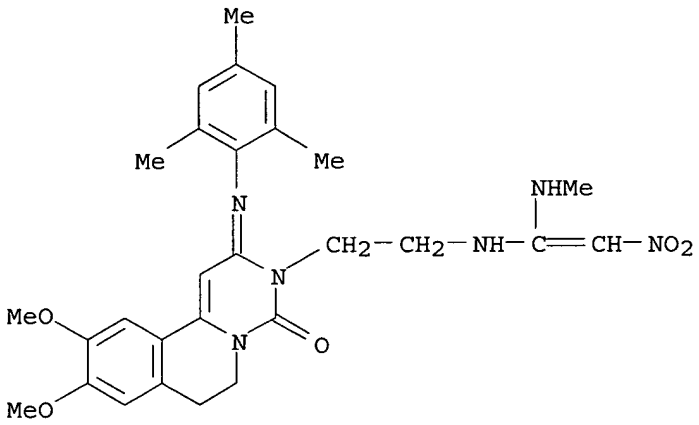
RN 298680-25-8 HCAPLUS
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



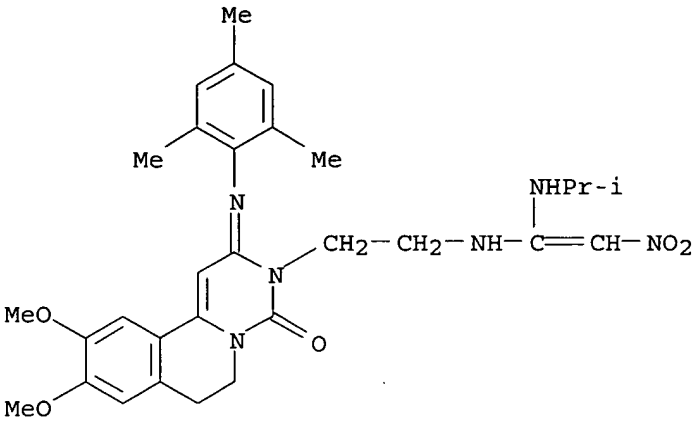
RN 298680-26-9 HCAPLUS
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



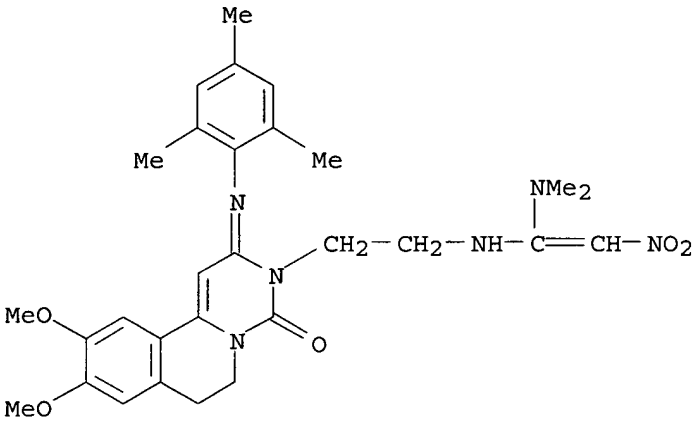
RN 298680-27-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



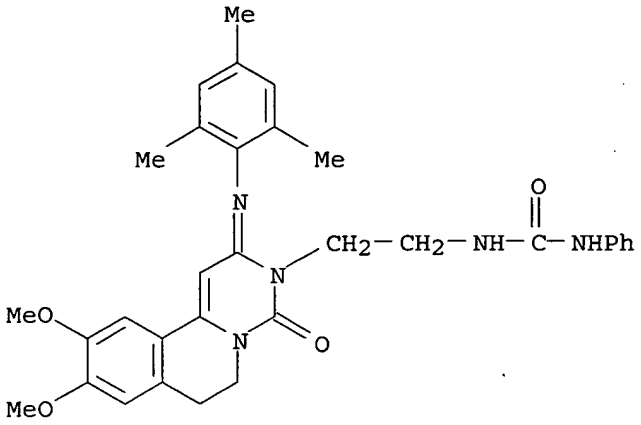
RN 298680-28-1 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



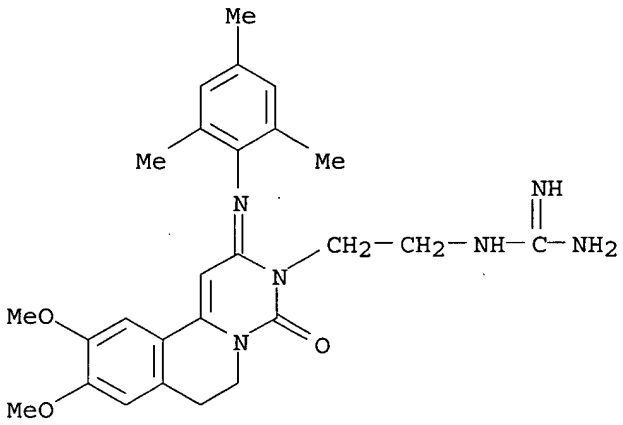
RN 298680-29-2 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



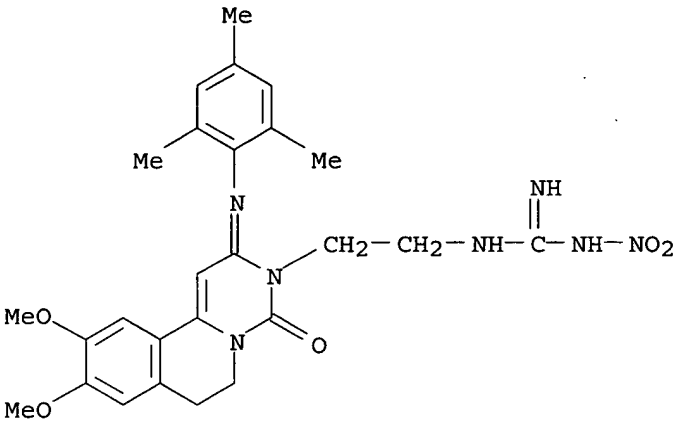
RN 298680-30-5 HCAPLUS
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



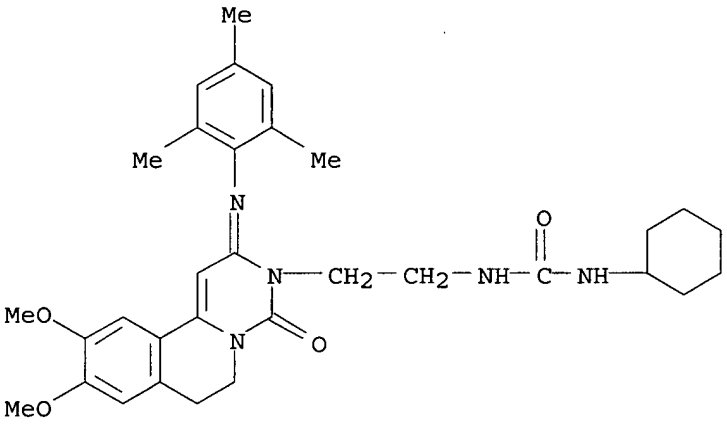
RN 298680-31-6 HCAPLUS
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-(9CI) (CA INDEX NAME)



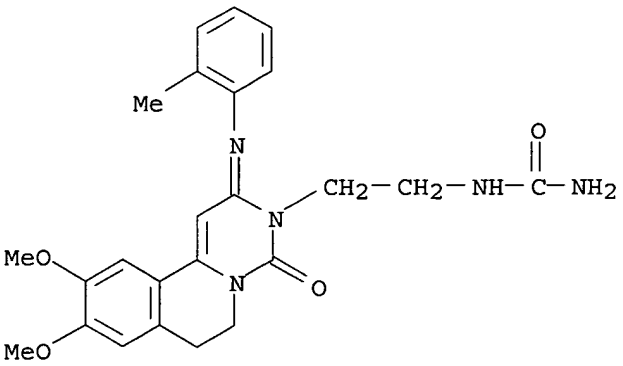
RN 298680-32-7 HCAPLUS
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



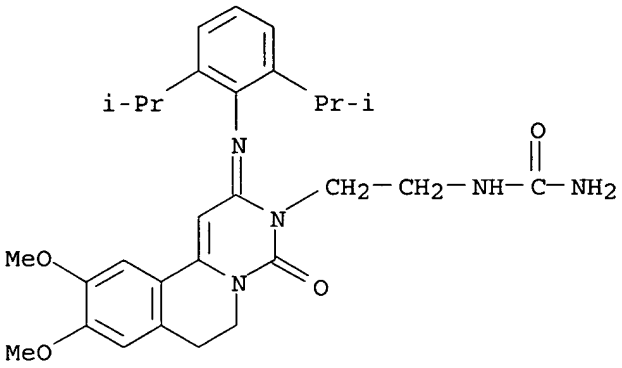
RN 298680-33-8 HCAPLUS
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



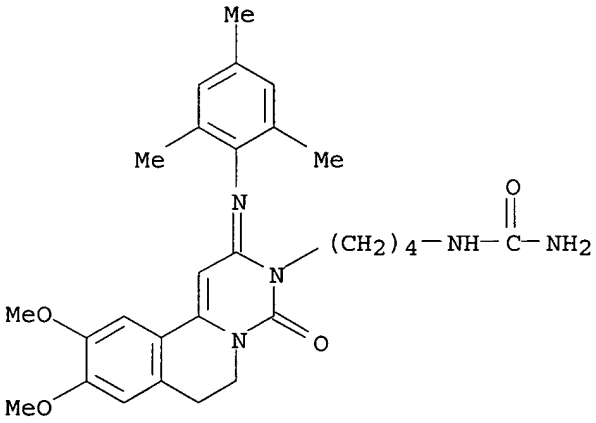
RN 298680-34-9 HCAPLUS
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



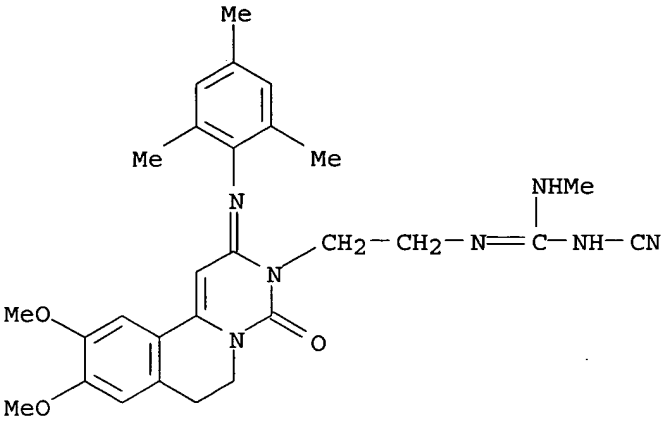
RN 298680-35-0 HCAPLUS
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



RN 298680-36-1 HCAPLUS
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)

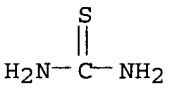


RN 298680-37-2 HCAPLUS
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)

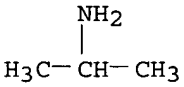


IT **62-56-6**, Thiourea, reactions **75-31-0**, Isopropylamine, reactions **88-05-1**, 2,4,6-Trimethylaniline **95-53-4**, 2-Methylaniline, reactions **103-71-9**, Phenyl isocyanate, reactions **574-98-1**, N-(2-Bromoethyl)phthalimide **1795-48-8**, Isopropyl isocyanate **2260-00-6** **3173-53-3**, Cyclohexyl isocyanate **5394-18-3**, N-(4-Bromobutyl)phthalimide **10191-60-3**, Dimethyl N-cyanodithioiminocarbonate **13623-94-4** **24544-04-5**, 2,6-Diisopropylaniline **61832-41-5** **298680-49-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

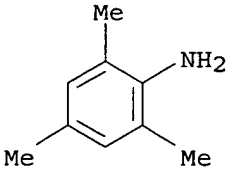
RN 62-56-6 HCAPLUS
CN Thiourea (9CI) (CA INDEX NAME)



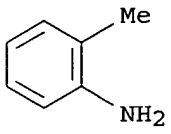
RN 75-31-0 HCAPLUS
CN 2-Propanamine (9CI) (CA INDEX NAME)



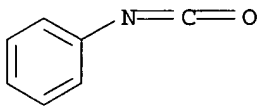
RN 88-05-1 HCAPLUS
CN Benzenamine, 2,4,6-trimethyl- (9CI) (CA INDEX NAME)



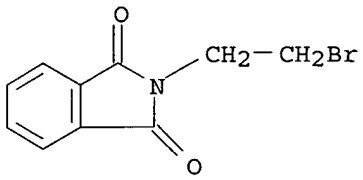
RN 95-53-4 HCAPLUS
CN Benzenamine, 2-methyl- (9CI) (CA INDEX NAME)



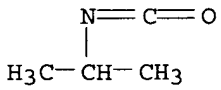
RN 103-71-9 HCAPLUS
CN Benzene, isocyanato- (9CI) (CA INDEX NAME)



RN 574-98-1 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)



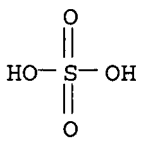
RN 1795-48-8 HCAPLUS
CN Propane, 2-isocyanato- (9CI) (CA INDEX NAME)



RN 2260-00-6 HCAPLUS
CN Carbamimidothioic acid, methyl ester, sulfate (9CI) (CA INDEX NAME)

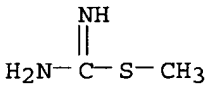
CM 1

CRN 7664-93-9
CMF H2 O4 S

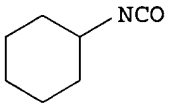


CM 2

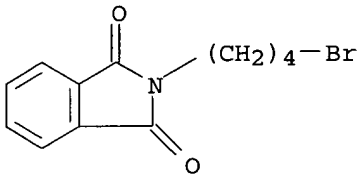
CRN 2986-19-8
CMF C2 H6 N2 S



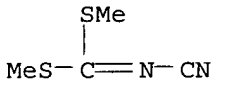
RN 3173-53-3 HCAPLUS
CN Cyclohexane, isocyanato- (9CI) (CA INDEX NAME)



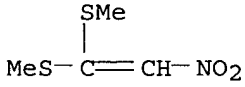
RN 5394-18-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-(4-bromobutyl)- (9CI) (CA INDEX NAME)



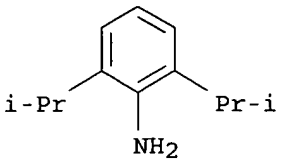
RN 10191-60-3 HCAPLUS
CN Carbonimidodithioic acid, cyano-, dimethyl ester (9CI) (CA INDEX NAME)



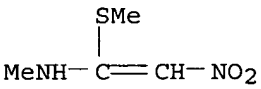
RN 13623-94-4 HCAPLUS
CN Ethene, 1,1-bis(methylthio)-2-nitro- (9CI) (CA INDEX NAME)



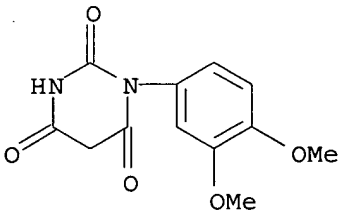
RN 24544-04-5 HCAPLUS
CN Benzenamine, 2,6-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



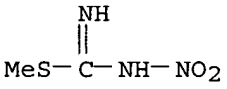
RN 61832-41-5 HCAPLUS
CN Ethenamine, N-methyl-1-(methylthio)-2-nitro- (9CI) (CA INDEX NAME)



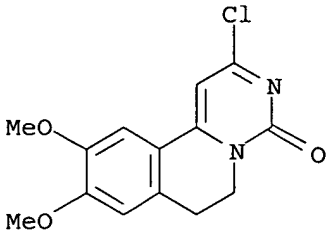
RN 298680-49-6 HCAPLUS
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 1-(3,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)



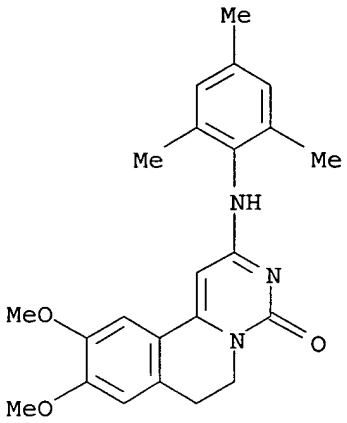
IT **2986-25-6P 75535-96-5P 76536-66-8P**
145013-05-4P 214358-62-0P 298680-38-3P
298680-39-4P 298680-40-7P 298680-41-8P
298680-42-9P 298680-43-0P 298680-44-1P
298680-45-2P 298680-46-3P 298680-47-4P
298680-48-5P 298680-50-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 2986-25-6 HCAPLUS
CN Carbamimidothioic acid, nitro-, methyl ester (9CI) (CA INDEX NAME)



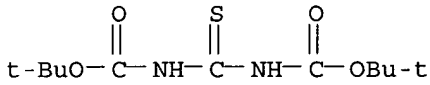
RN 75535-96-5 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2-chloro-6,7-dihydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)



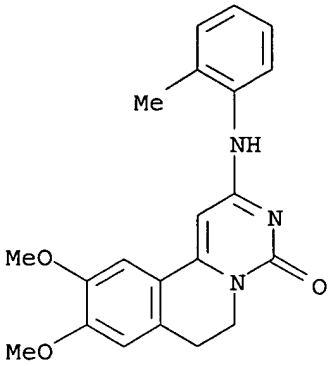
RN 76536-66-8 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 6,7-dihydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)amino]- (9CI) (CA INDEX NAME)



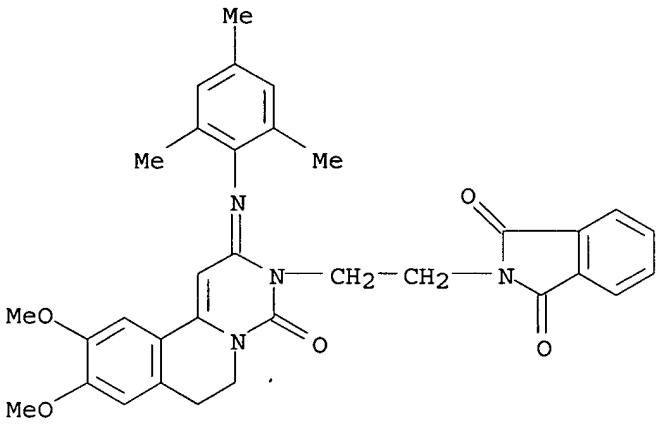
RN 145013-05-4 HCAPLUS
CN Carbamic acid, carbonothioylbis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



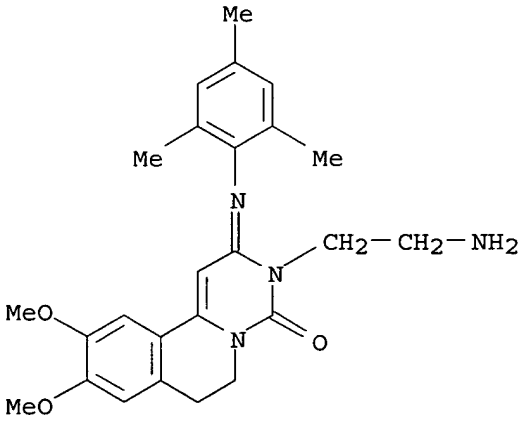
RN 214358-62-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)amino]- (9CI) (CA INDEX NAME)



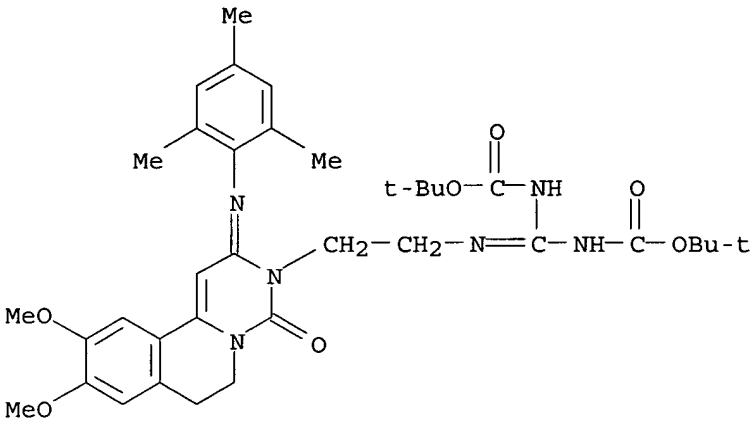
RN 298680-38-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



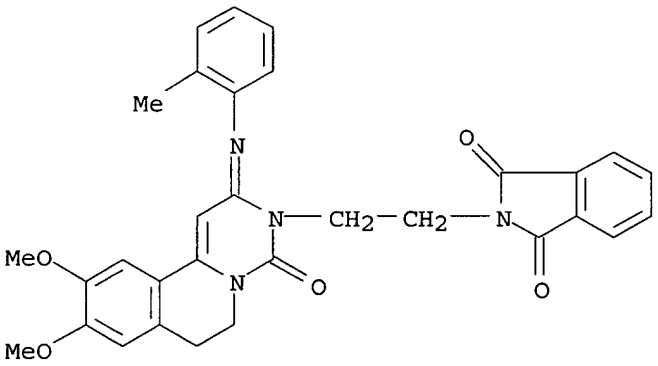
RN 298680-39-4 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



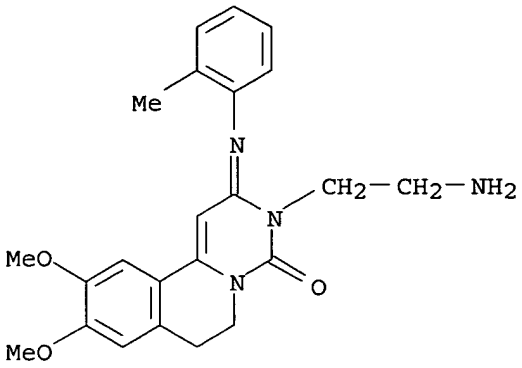
RN 298680-40-7 HCAPLUS
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



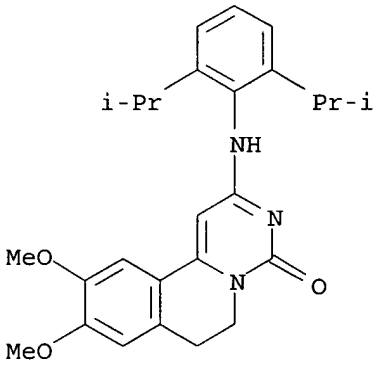
RN 298680-41-8 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



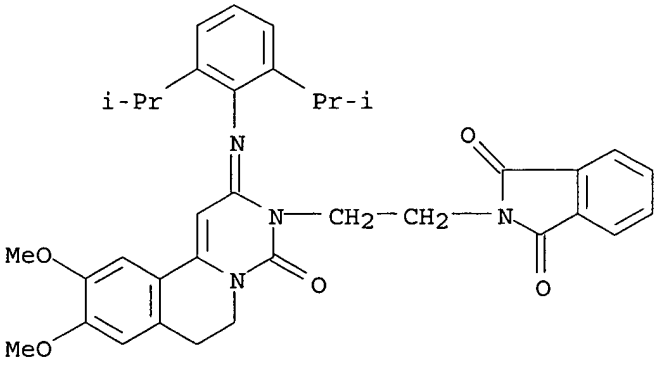
RN 298680-42-9 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-43-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2-[[2,6-bis(1-methylethyl)phenyl]amino]-6,7-dihydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)

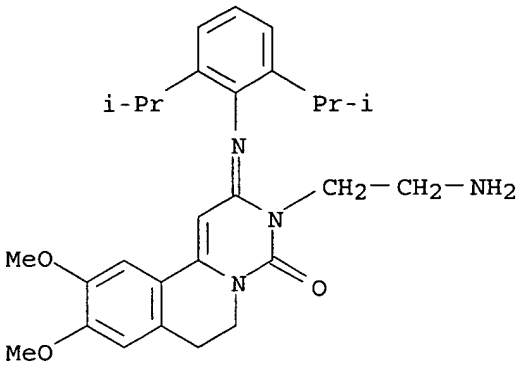


RN 298680-44-1 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

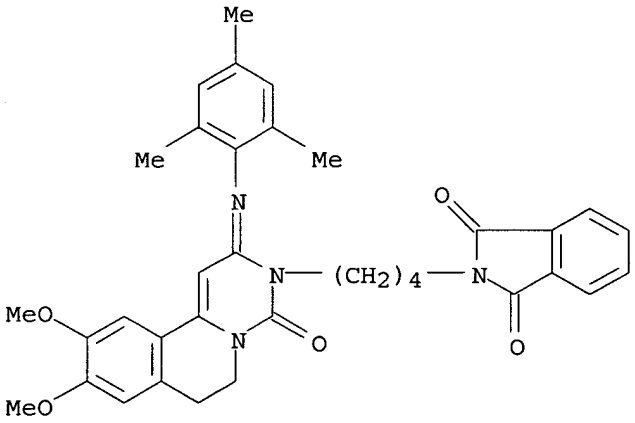


RN 298680-45-2 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(2-aminoethyl)-2-[[2,6-bis(1-

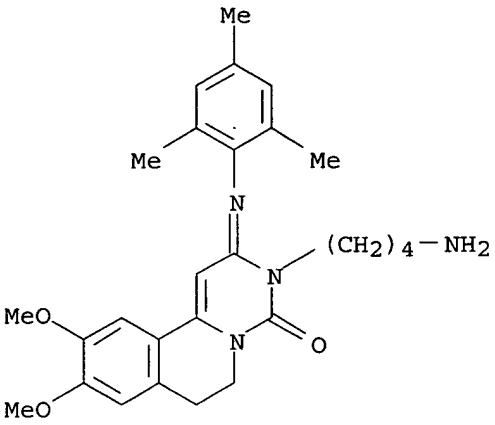
methylethyl)phenyl]imino]-2,3,6,7-tetrahydro-9,10-dimethoxy- (9CI) (CA INDEX NAME)



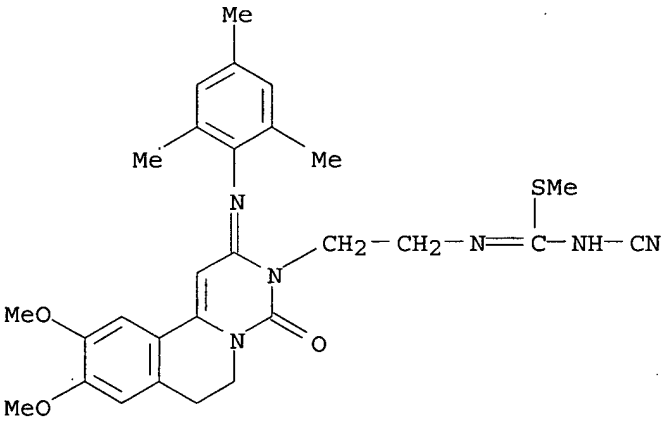
RN 298680-46-3 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



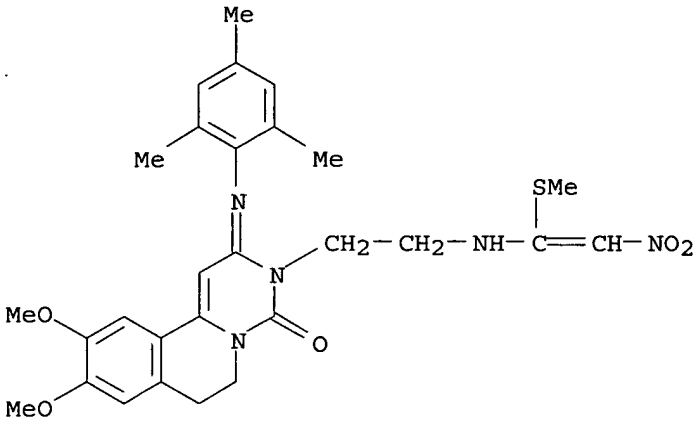
RN 298680-47-4 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-(4-aminobutyl)-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 298680-48-5 HCAPLUS
CN Carbamimidothioic acid, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 298680-50-9 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylthio)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)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                E US2004-786650/APPS
L1            1 SEA ABB=ON  PLU=ON  US2004-786650/AP
                SEL RN L1

     FILE 'REGISTRY' ENTERED AT 10:59:41 ON 14 OCT 2005
L2           46 SEA ABB=ON  PLU=ON  (10191-60-3/BI OR 103-71-9/BI OR 13623-94-4
                /BI OR 145013-05-4/BI OR 1795-48-8/BI OR 214358-62-0/BI OR
                2260-00-6/BI OR 24544-04-5/BI OR 2986-25-6/BI OR 298680-25-8/BI
                 OR 298680-26-9/BI OR 298680-27-0/BI OR 298680-28-1/BI OR
                298680-29-2/BI OR 298680-30-5/BI OR 298680-31-6/BI OR 298680-32
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                298680-50-9/BI OR 3173-53-3/BI OR 5394-18-3/BI OR 574-98-1/BI
                OR 61832-41-5/BI OR 62-56-6/BI OR 75-31-0/BI OR 75535-96-5/BI
                OR 76536-66-8/BI OR 88-05-1/BI OR 9036-21-9/BI OR 95-53-4/BI)

     FILE 'HCAPLUS' ENTERED AT 11:00:05 ON 14 OCT 2005
L3            1 SEA ABB=ON  PLU=ON  L1 AND L2
                D IALL HITSTR L3

     FILE 'REGISTRY' ENTERED AT 11:03:20 ON 14 OCT 2005
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L5            0 SEA SSS SAM L4
L6            0 SEA ABB=ON  PLU=ON  NCNC3/ES(S)NC5/ES(S)C6/ES AND NRS>1 AND
                N>4 AND O>0
L7         2240 SEA ABB=ON  PLU=ON  NCNC3/ESS(S)NC5/ESS(S)C6/ESS AND NRS>1 AND
                N>4 AND O>0
L8            0 SEA SUB=L7 SSS SAM L4

     FILE 'REGISTRY' ENTERED AT 11:21:49 ON 14 OCT 2005
L9              STR L4
L10           0 SEA SSS SAM L9
L11             STR L9
L12           0 SEA SSS SAM L11
L13          14 SEA SSS FUL L11

     FILE 'HCAPLUS' ENTERED AT 11:32:37 ON 14 OCT 2005
L14           2 SEA ABB=ON  PLU=ON  L13
L15           1 SEA ABB=ON  PLU=ON  L1 AND L14

     FILE 'MARPAT' ENTERED AT 11:33:22 ON 14 OCT 2005
L16           0 SEA SSS SAM L11
L17           1 SEA SSS FUL L11
L18           0 SEA ABB=ON  PLU=ON  L17 NOT L14

     FILE 'BEILSTEIN' ENTERED AT 11:34:33 ON 14 OCT 2005
L19           0 SEA SSS FUL L11

     FILE 'USPATFULL, USPAT2' ENTERED AT 11:35:56 ON 14 OCT 2005
L20           5 SEA ABB=ON  PLU=ON  L13
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FILE 'HCAPLUS, USPATFULL, USPAT2' ENTERED AT 11:37:00 ON 14 OCT 2005
L21 6 DUP REM L14 L20 (1 DUPLICATE REMOVED)
ANSWERS '1-2' FROM FILE HCAPLUS
ANSWERS '3-6' FROM FILE USPATFULL

FILE HOME

FILE HCAPLUS

FILE COVERS 1907 - 14 Oct 2005 VOL 143 ISS 17
FILE LAST UPDATED: 13 Oct 2005 (20051013/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 OCT 2005 HIGHEST RN 865114-63-2
DICTIONARY FILE UPDATES: 12 OCT 2005 HIGHEST RN 865114-63-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE MARPAT
FILE CONTENT: 1988-PRESENT (VOL 143 ISS 15)(20051007/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6916824 12 JUL 2005
DE 10359831 14 JUL 2005
EP 1550665 06 JUL 2005
JP 2005183717 07 JUL 2005
WO 2005079855 01 SEP 2005

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

FILE BEILSTEIN
FILE LAST UPDATED ON OCTOBER 10, 2005

FILE COVERS 1771 TO 2005.
FILE CONTAINS 9,363,954 SUBSTANCES

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

****
* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *
****

NEW
* **PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**
* **NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Oct 2005 (20051013/PD)
FILE LAST UPDATED: 13 Oct 2005 (20051013/ED)
HIGHEST GRANTED PATENT NUMBER: US6954941
HIGHEST APPLICATION PUBLICATION NUMBER: US2005229280
CA INDEXING IS CURRENT THROUGH 13 Oct 2005 (20051013/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Oct 2005 (20051013/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE USPAT2

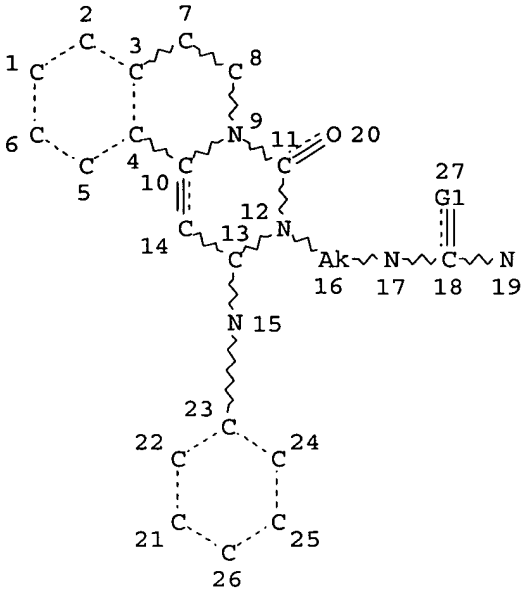
FILE COVERS 2001 TO PUBLICATION DATE: 13 Oct 2005 (20051013/PD)
FILE LAST UPDATED: 13 Oct 2005 (20051013/ED)
HIGHEST GRANTED PATENT NUMBER: US2005054189
HIGHEST APPLICATION PUBLICATION NUMBER: US2005229256
CA INDEXING IS CURRENT THROUGH 13 Oct 2005 (20051013/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Oct 2005 (20051013/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from the earliest to the latest publication.

=> d que l21 stat
L11 STR



VAR G1=O/NH/28/30/32
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 33

STEREO ATTRIBUTES: NONE
L13 14 SEA FILE=REGISTRY SSS FUL L11
L14 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L13
L20 5 SEA L13
L21 6 DUP REM L14 L20 (1 DUPLICATE REMOVED)

=> d l21 ibib abs hitstr 1-6

L21 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:1006815 HCAPLUS
DOCUMENT NUMBER: 140:35974
TITLE: Treatment for depression and anxiety by the combination of a PDE IV inhibitor and an antidepressant or an anxiolytic agent
INVENTOR(S): Sobolov-Jaynes, Susan Beth; Schmidt, Christopher Joseph
PATENT ASSIGNEE(S): Pfizer Products Inc., USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2003105902 A1 20031224 WO 2003-IB2295 20030605
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003235631 A1 20031225 US 2003-387060 20030312
CA 2488138 AA 20031224 CA 2003-2488138 20030605
EP 1517707 A1 20050330 EP 2003-727833 20030605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
BR 2003011903 A 20050607 BR 2003-11903 20030605
PRIORITY APPLN. INFO.: US 2002-389181P P 20020617
WO 2003-IB2295 W 20030605

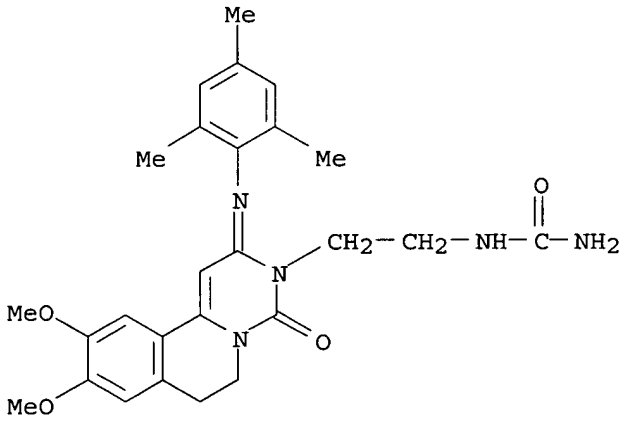
OTHER SOURCE(S): MARPAT 140:35974

AB The present invention relates to a method of treating depression or anxiety in a mammal, including a human, by administering to the mammal a PDE IV inhibitor in combination with an antidepressant or an anxiolytic agent. It also relates to pharmaceutical compns. containing a pharmaceutically acceptable carrier, a PDE IV inhibitor and an anxiolytic agent or antidepressant.

IT **298680-25-8**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment for depression and anxiety by combination of a PDE IV inhibitor and an antidepressant or an anxiolytic agent)

RN 298680-25-8 HCAPLUS

CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:707163 HCAPLUS

DOCUMENT NUMBER: 133:266869
TITLE: Preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors.
INVENTOR(S): Oxford, Alexander William; Jack, David
PATENT ASSIGNEE(S): Vanguard Medica Ltd., UK
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058308	A1	20001005	WO 2000-GB1193	20000329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NZ 514158	A	20000329	NZ 2000-514158	20000329
CA 2368413	AA	20001005	CA 2000-2368413	20000329
AU 2000041274	A5	20001016	AU 2000-41274	20000329
AU 773504	B2	20040527		
EP 1165558	A1	20020102	EP 2000-920857	20000329
EP 1165558	B1	20030924		
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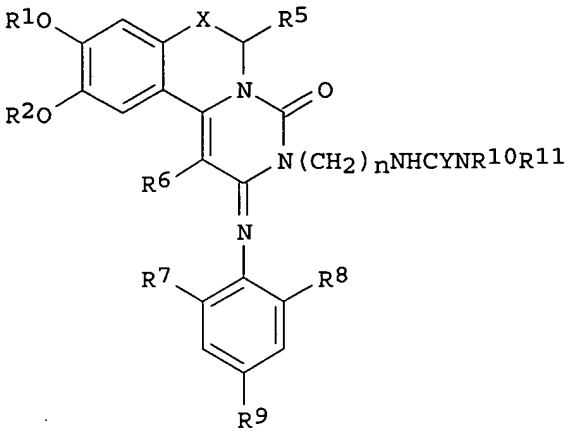
BR 2000009446	A	20020115	BR 2000-9446	20000329
JP 2002540207	T2	20021126	JP 2000-608010	20000329
AT 250602	E	20031015	AT 2000-920857	20000329
PT 1165558	T	20040227	PT 2000-920857	20000329
ES 2208310	T3	20040616	ES 2000-920857	20000329
US 2003036542	A1	20030220	US 2001-964260	20010926
US 6794391	B2	20040921		
NO 2001004728	A	20011123	NO 2001-4728	20010928
US 2004171828	A1	20040902	US 2004-786650	20040224
US 2004176353	A1	20040909	US 2004-786400	20040224

PRIORITY APPLN. INFO.:	GB 1999-7454	A	19990331
	GB 1999-9802	A	19990428
	WO 2000-GB1193	W	20000329
	US 2001-964260	A3	20010926

OTHER SOURCE(S): MARPAT 133:266869
GI



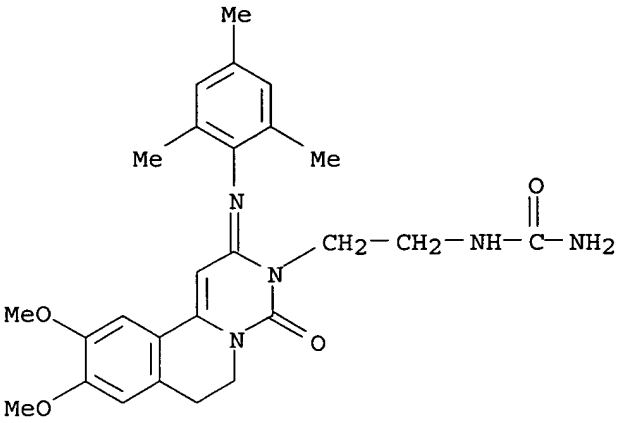
I

AB Title compds. [I; R1, R2 = alkyl, acyl; R5 = H, alkyl, alkenyl, alkynyl; R6 = H, alkyl, alkenyl, alkynyl, amino, alkylamino, dialkylamino, acylamino; R7, R8 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; R9 = H, halo, OH, CF3, alkyl, alkenyl, alkynyl, acyl, alkythio, alkoxy, cycloalkyl; X = OCH2, CR3R4; R3, R4 = H, alkyl; R10, R11 = H, alkyl, cycloalkyl, Ph; Y = O, CHNO2, NCN, NH, NNO2; n = 2-4], were prepared I have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3-methyl-2-mesitylimino-2,3,6,7-tetrahydro-4H--pyrimido[6,1-a]isoquinolin-4-one) and do not have trequinsin's very bitter taste. Thus, Na cyanate was added dropwise to 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one (preparation given) in aqueous HCl
at 80° followed by stirring for 2 h to give 54% 9,10-dimethoxy-2-(2,4,6-trimethylphenylimino)-3-(N-carbamoyl-2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one(II). II inhibited PDE3 with IC50 = 0.46 μM and was tasteless.

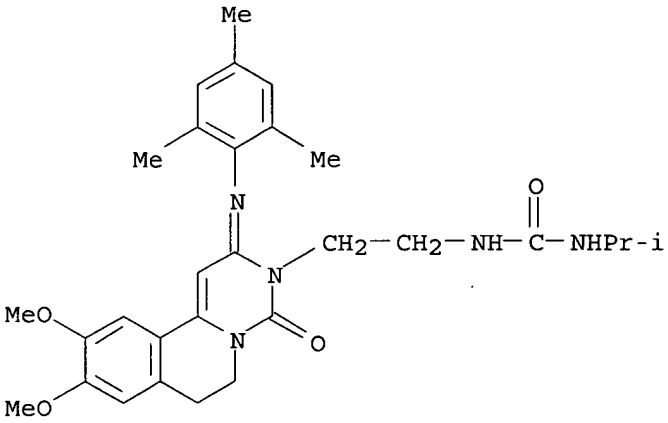
IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

RN 298680-25-8 HCAPLUS

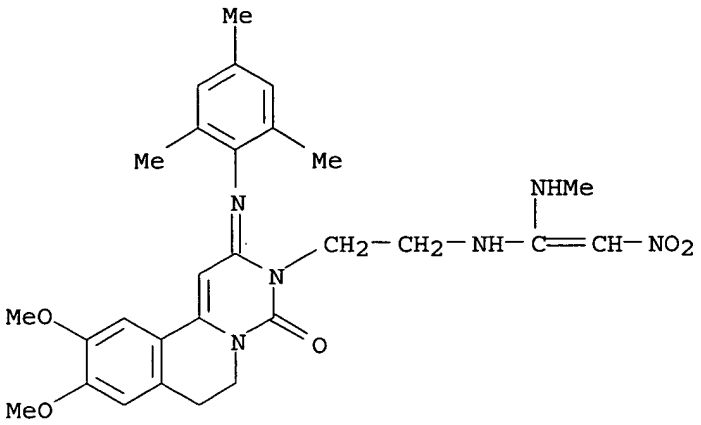
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-(9CI) (CA INDEX NAME)



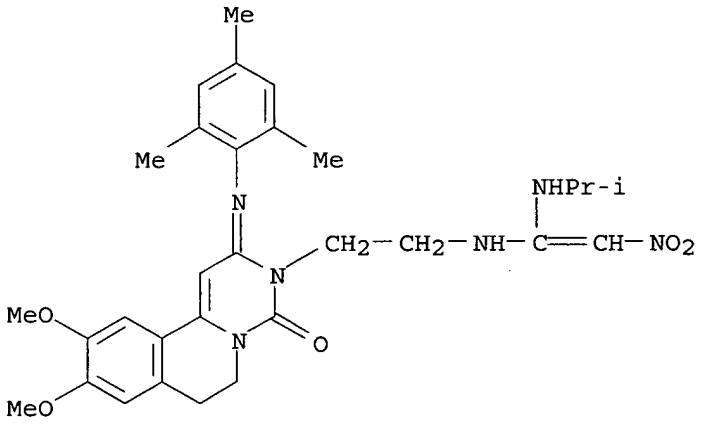
RN 298680-26-9 HCAPLUS
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



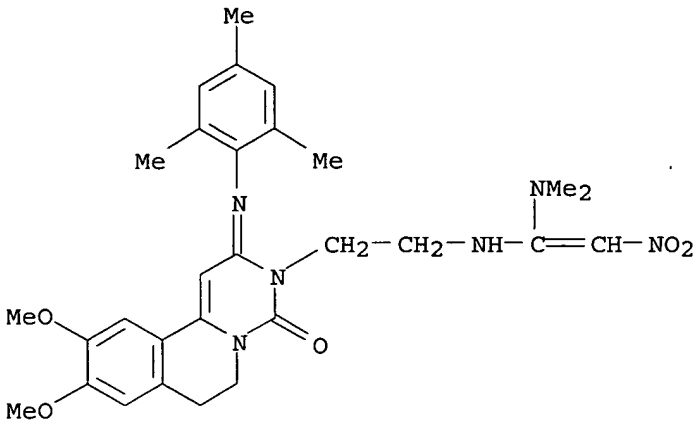
RN 298680-27-0 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



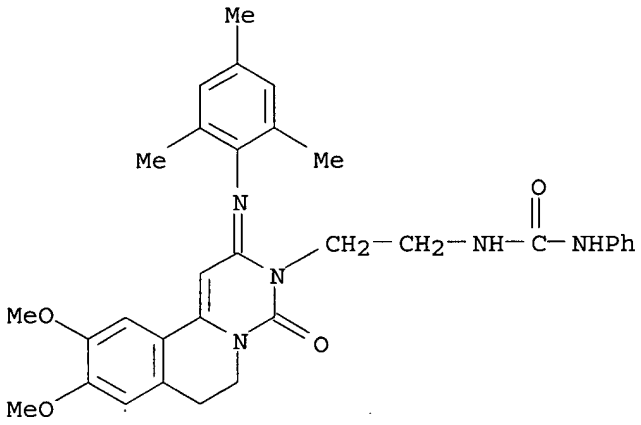
RN 298680-28-1 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



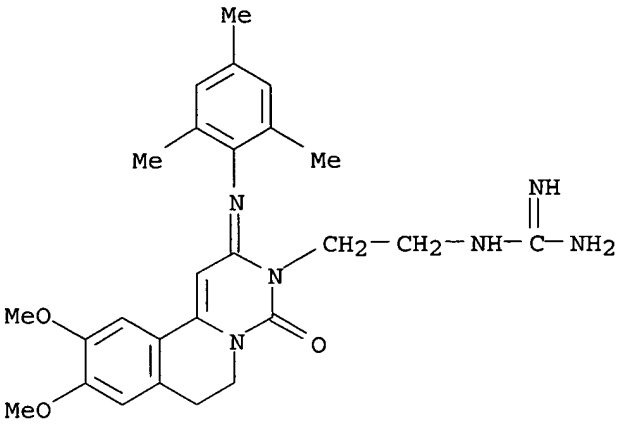
RN 298680-29-2 HCAPLUS
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



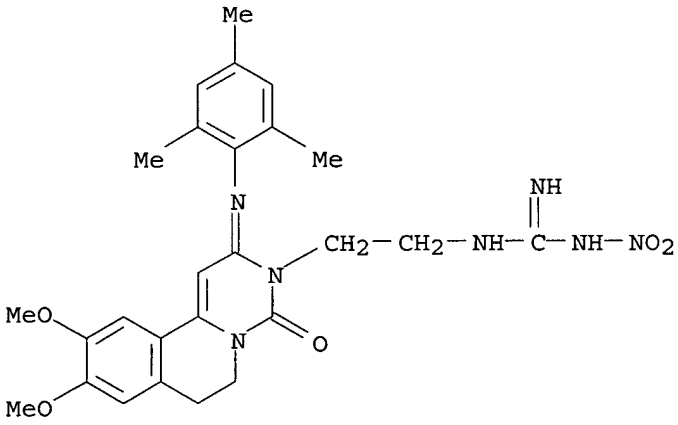
RN 298680-30-5 HCAPLUS
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



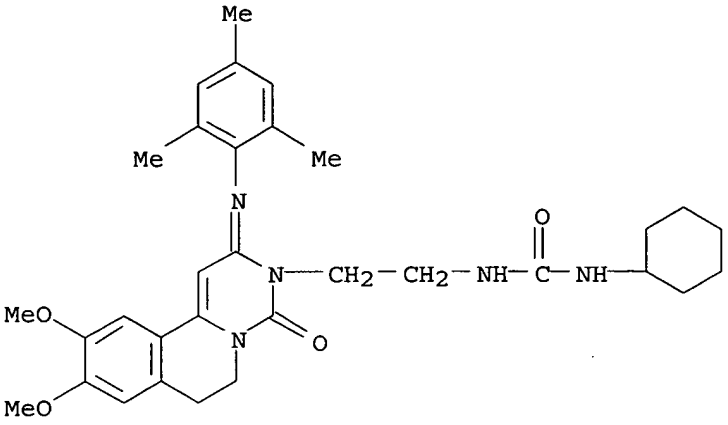
RN 298680-31-6 HCAPLUS
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



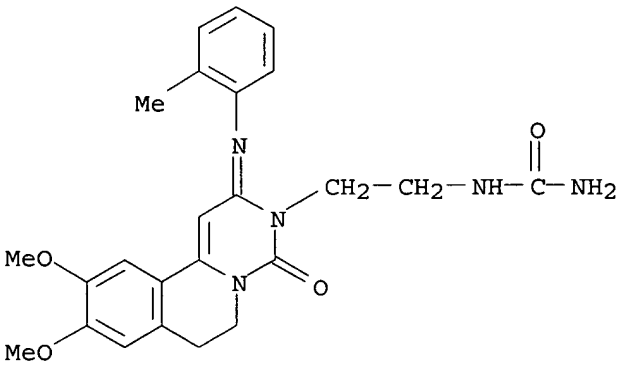
RN 298680-32-7 HCAPLUS
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



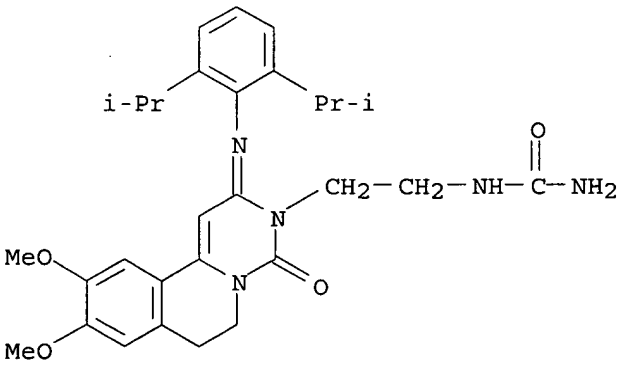
RN 298680-33-8 HCAPLUS
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



RN 298680-34-9 HCAPLUS
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

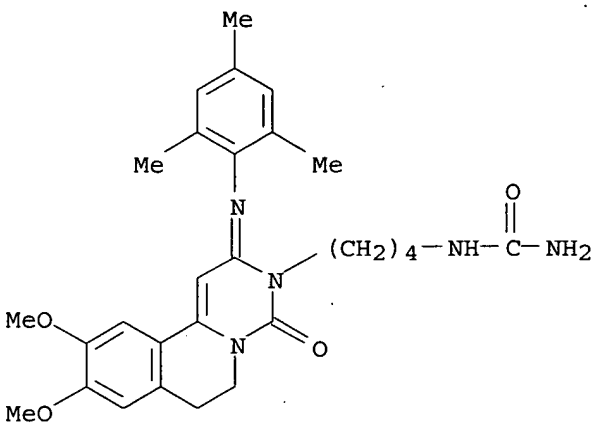


RN 298680-35-0 HCAPLUS
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

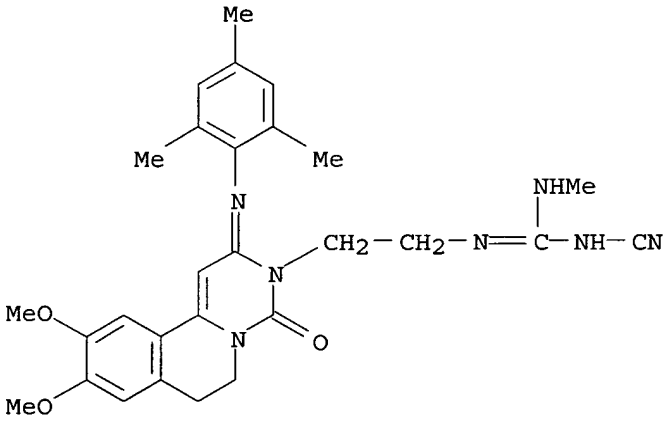


RN 298680-36-1 HCAPLUS

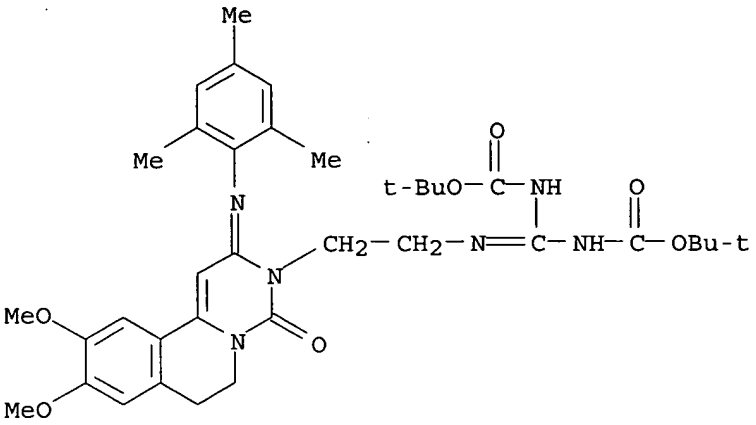
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



RN 298680-37-2 HCAPLUS
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)



IT **298680-40-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 298680-40-7 HCAPLUS
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 3 OF 6 USPATFULL on STN DUPLICATE 1

ACCESSION NUMBER:	2003:51584 USPATFULL		
TITLE:	Derivatives of pyrimido[6.1-a]isoquinolin-4-one		
INVENTOR(S):	Oxford, Alexander William, Royston, UNITED KINGDOM Jack, David, Wheathampstead, UNITED KINGDOM		

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003036542	A1	20030220	
	US 6794391	B2	20040921	
APPLICATION INFO.:	US 2001-964260	A1	20010926	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1999-7454	19990331
	GB 1999-9802	19990428

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	Dike, Bronstein, Roberts & Cushman, Intellectual Property Patent Practice, EDWARDS & ANGELL, LLP, P.O. Box 9169, Boston, MA, 02209
NUMBER OF CLAIMS:	50
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	5 Drawing Page(s)
LINE COUNT:	1581

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides compounds or salts thereof of the general formula (I): ##STR1##

wherein each of R.sup.1 and RX independently represents a C.sub.1-6 alkyl or C.sub.2-7 acyl group; X represents OCH.sub.2 or a group CR.sup.3R.sup.4; wherein each of R.sup.3 or R.sup.4 independently represents a hydrogen atom or a C.sub.1-3 alkyl group; R.sup.5 represents a hydrogen atom or a C.sub.1-3 alkyl, C.sub.2-3 alkenyl or C.sub.2-3 alkynyl group; R.sup.6 represents a hydrogen atom or a C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, amino, C.sub.1-6alkylamino, di(C.sub.1-6) alkylamino or C.sub.2-7 acylamino group; each of R.sup.7 and R.sup.8 independently represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl,

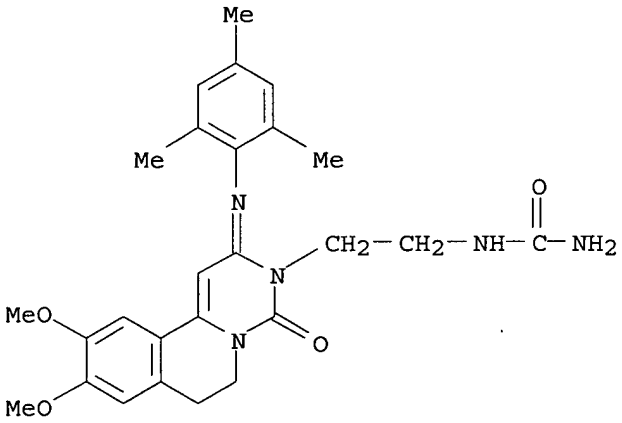
C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.2-7 acyl, C.sub.1-6 alkylthio, C.sub.1-6 alkoxy, C.sub.3-6 cycloalkyl; and R.sup.9 represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.2-7 acyl, C.sub.1-6 alkylthio, C.sub.1-6 alkoxy or C.sub.3-6 cycloalkyl group. The compounds or salts thereof are useful for treatment of respiratory disorders such as asthma. Compounds of the invention have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3 methyl-2-mesitylimino-2,3,6,7-tetrahydro-.sub.4-H-pyrimido[6,1-a]isoquinolin-4-one).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

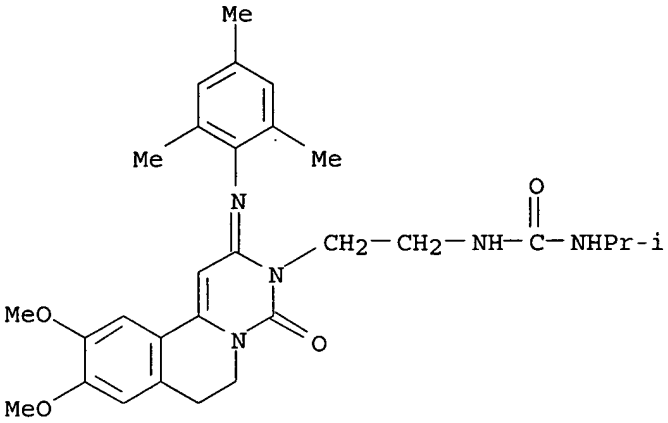
RN 298680-25-8 USPATFULL

CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

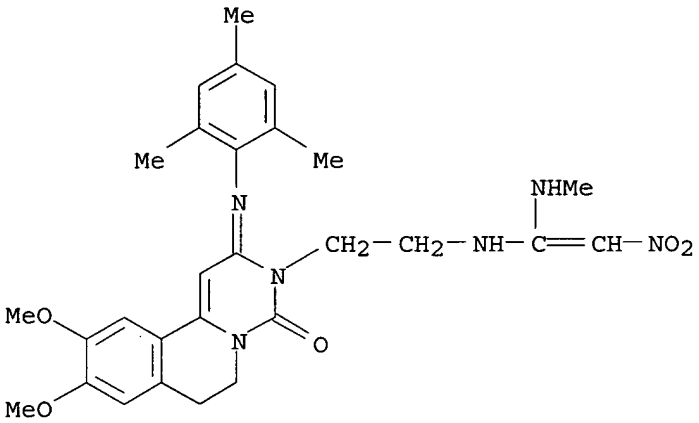


RN 298680-26-9 USPATFULL

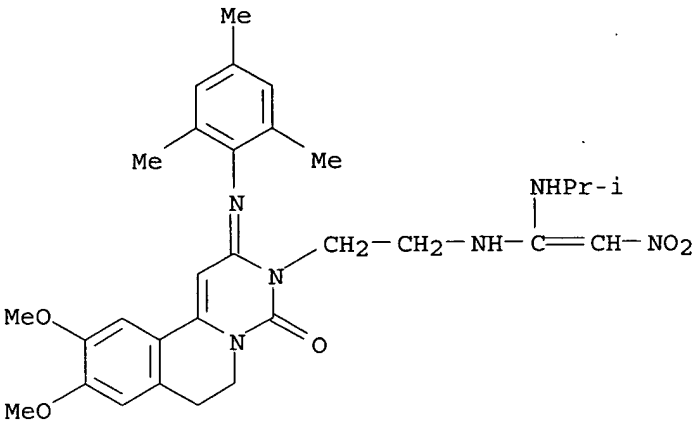
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



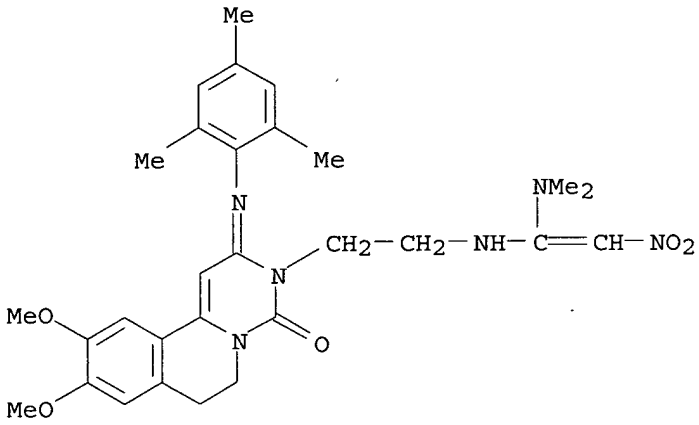
RN 298680-27-0 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



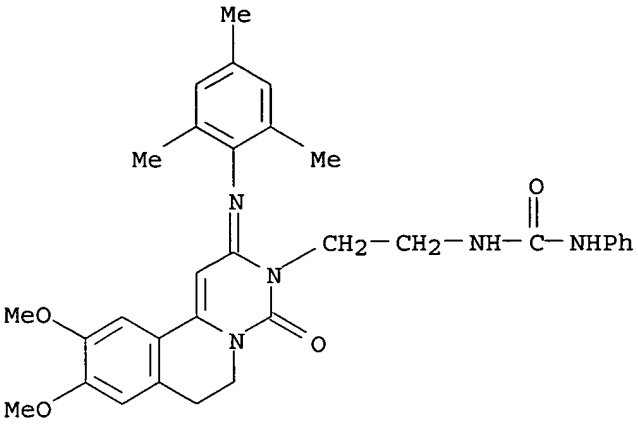
RN 298680-28-1 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



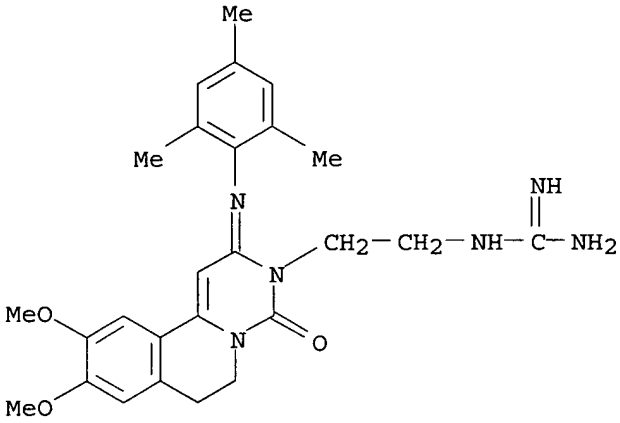
RN 298680-29-2 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



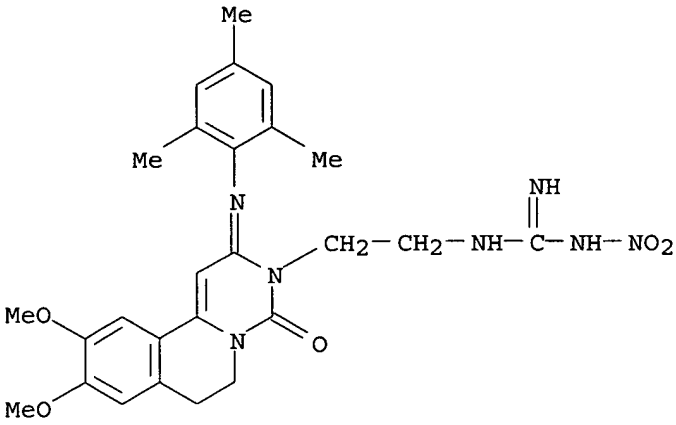
RN 298680-30-5 USPATFULL
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



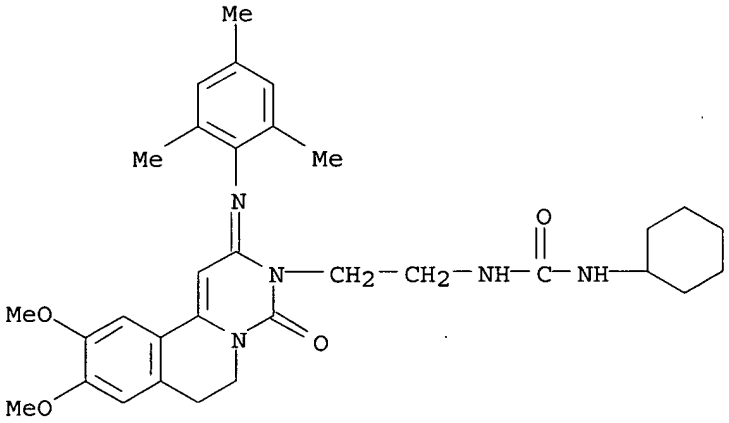
RN 298680-31-6 USPATFULL
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-(9CI) (CA INDEX NAME)



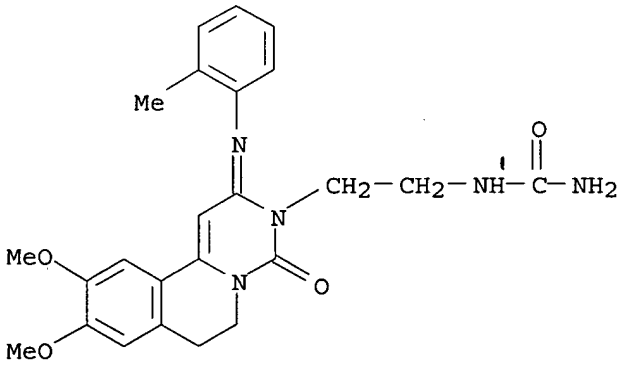
RN 298680-32-7 USPATFULL
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



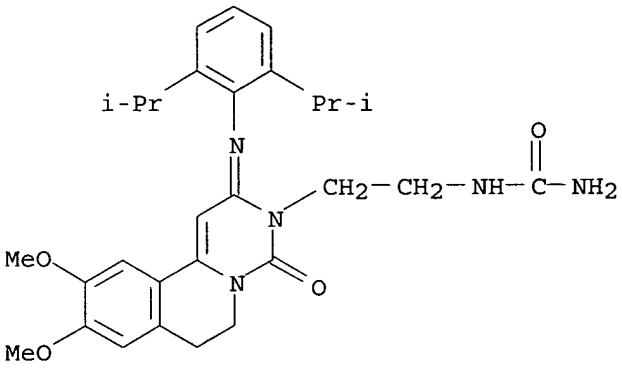
RN 298680-33-8 USPATFULL
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



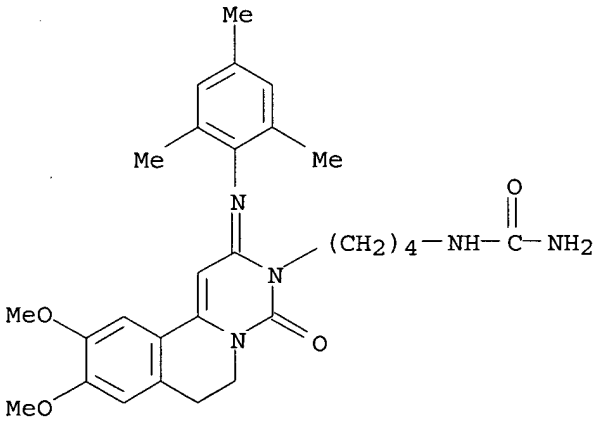
RN 298680-34-9 USPATFULL
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



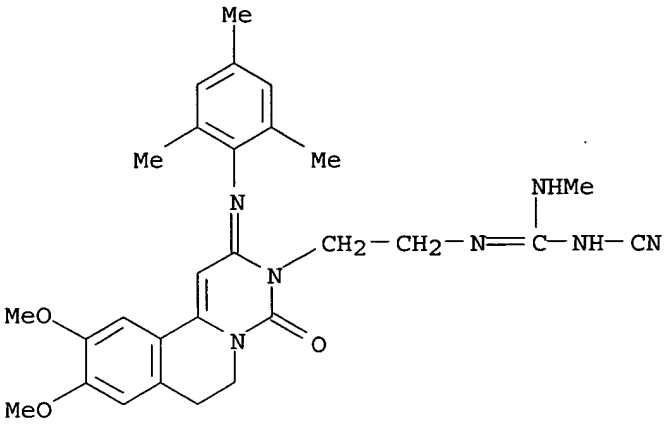
RN 298680-35-0 USPATFULL
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



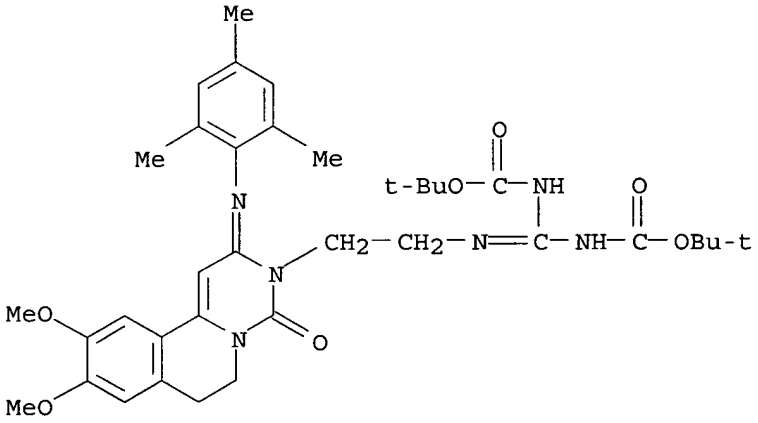
RN 298680-36-1 USPATFULL
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



RN 298680-37-2 USPATFULL
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)



IT **298680-40-7P**
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 298680-40-7 USPATFULL
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



L21 ANSWER 4 OF 6 USPATFULL on STN
ACCESSION NUMBER: 2004:227967 USPATFULL
TITLE: Derivatives of pyrimido[6,1-a]isoquinolin-4-one
INVENTOR(S): Oxford, Alexander William, Royston, UNITED KINGDOM
Jack, David, Wheathampstead, UNITED KINGDOM
PATENT ASSIGNEE(S): Vernalis Limited (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004176353	A1	20040909
APPLICATION INFO.:	US 2004-786400	A1	20040224 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-964260, filed on 26 Sep 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1999-7454	19990331
	GB 1999-9802	19990428
	WO 2000-58308	20001005

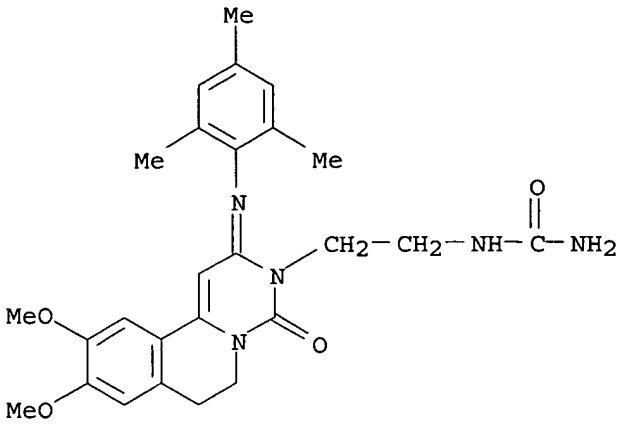
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: EDWARDS & ANGELL, LLP, P.O. BOX 55874, BOSTON, MA, 02205
NUMBER OF CLAIMS: 50
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 1579
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compounds of general formula (I) wherein each of R.sup.1 and R.sup.2 independently represents a C.sub.1-6 alkyl or C.sub.2-7 acyl group; R.sup.5 represents a hydrogen atom or a C.sub.1-3 alkyl, C.sub.2-3 alkenyl or C.sub.2-3 alkynyl group; R.sup.6 represents a hydrogen atom or a C.sub.1-6 alkyl C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, amino, C.sub.1-6 alkylamino, di(C.sub.1-6) alkylamino or C.sub.2-7 acylamino group; each of R.sup.7 and R.sup.8 independently represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.2-7 acyl, C.sub.1-6 alkythio, C.sub.3-6 alkoxy, C.sub.3-6 cycloalkyl; and R.sup.9 represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.1-7 acyl, C.sub.1-6 alkythio. C.sub.1-6 alkoxy or C.sub.3-6 cycloalkyl group, X represents OCH.sub.2.sup.- or a group CR.sup.3R.sup.4, wherein each of R.sup.3 and R.sup.4 independently represents a hydrogen atom or a C.sub.1-3 alkyl group; each of R.sup.10 and R.sup.11 independently represents a hydrogen atom, a C.sub.1-3 alkyl C.sub.3-6 cycloalkyl or phenyl group; y represents an oxygen atom or a group CHNO.sub.2, NCN, NH or NNO.sub.2, n is an integer from 2 to 4; or a salt thereof; arm useful for treatment of respiratory disorders such as asthma. Compounds of the invention have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3-methyl-2-mesitylimino-2,3,6,7-tetrahydro-4H-pyrimido [6,1-a]isoquinolin-4-one) and do not have trequinsin's very bitter taste. ##STR1##

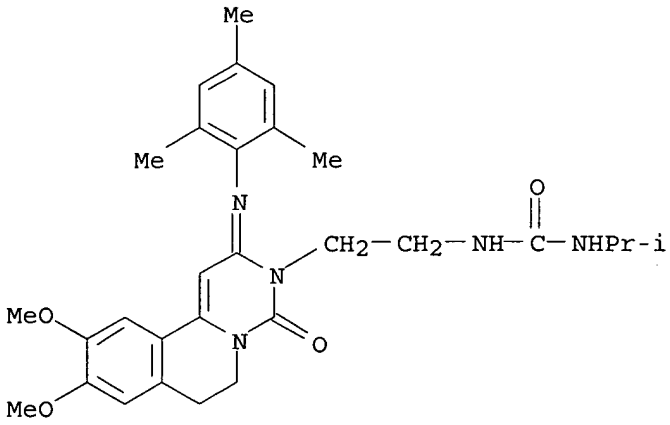
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

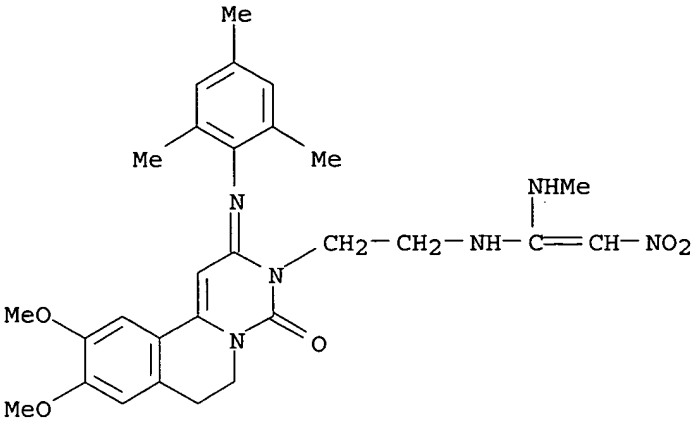
RN 298680-25-8 USPATFULL
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



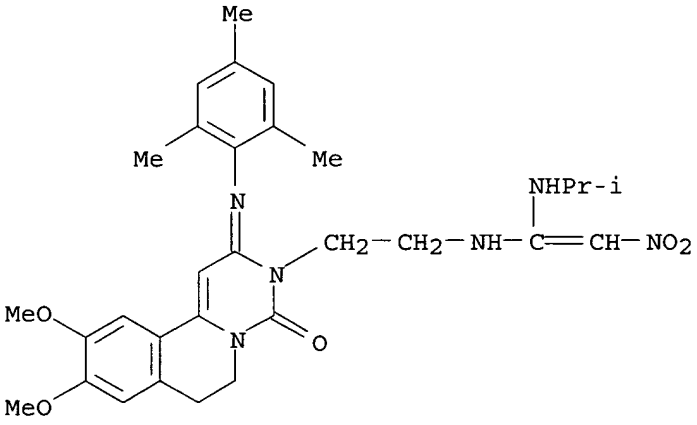
RN 298680-26-9 USPATFULL
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



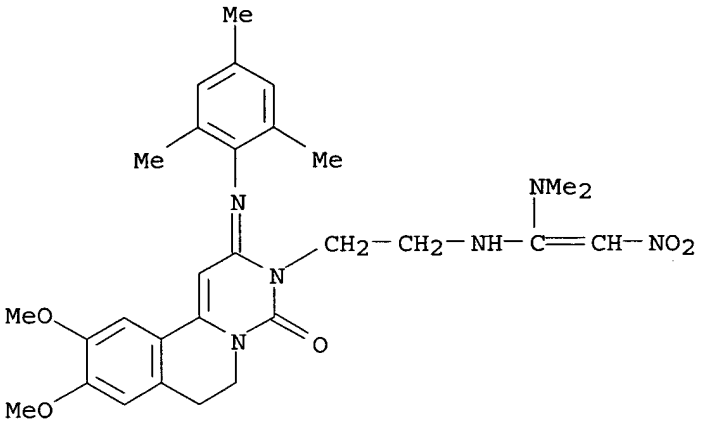
RN 298680-27-0 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



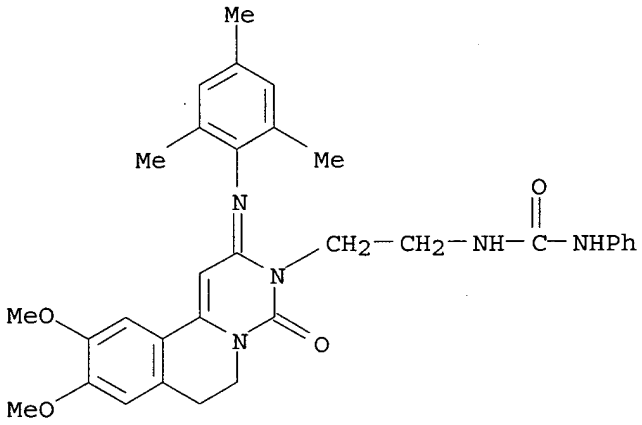
RN 298680-28-1 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



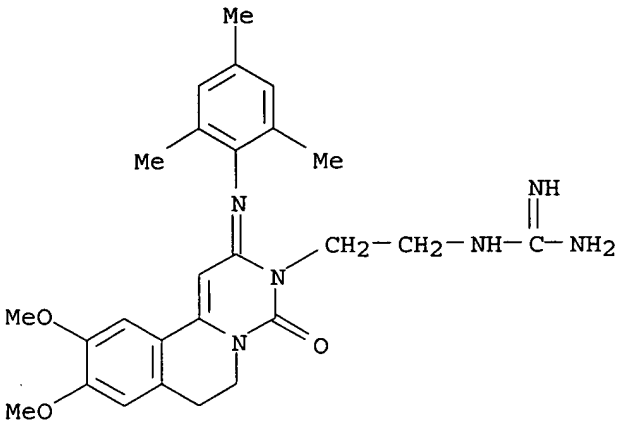
RN 298680-29-2 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



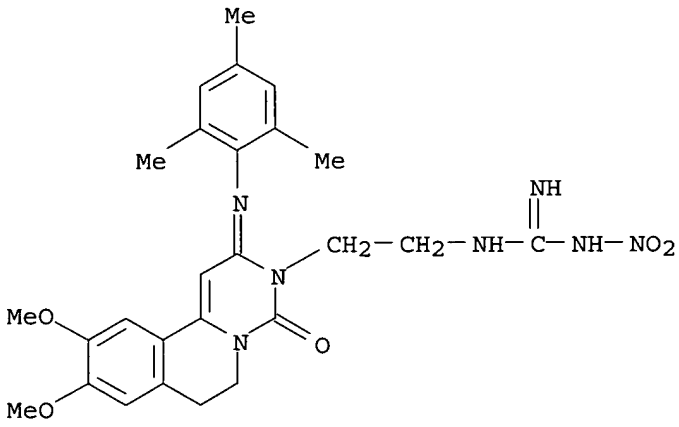
RN 298680-30-5 USPATFULL
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



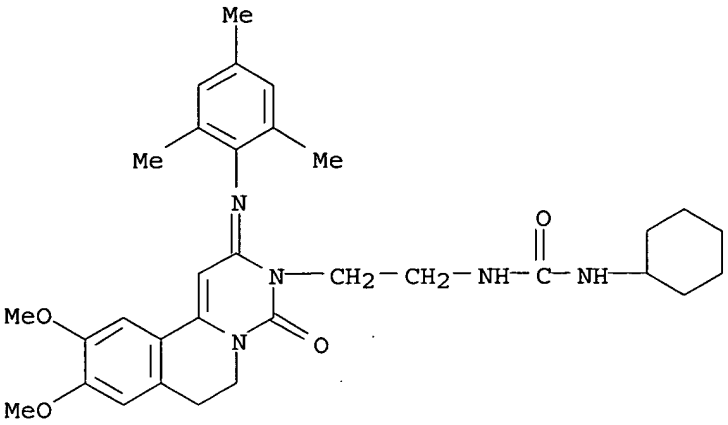
RN 298680-31-6 USPATFULL
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



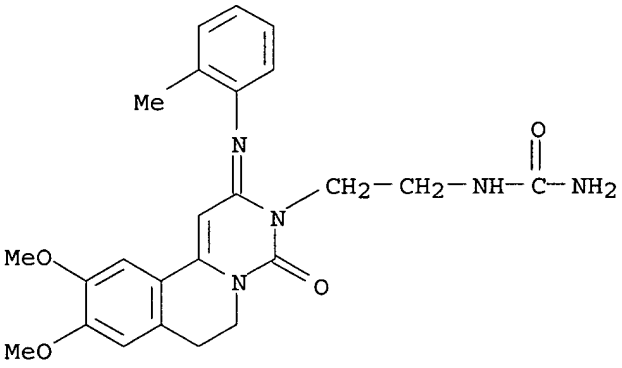
RN 298680-32-7 USPATFULL
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



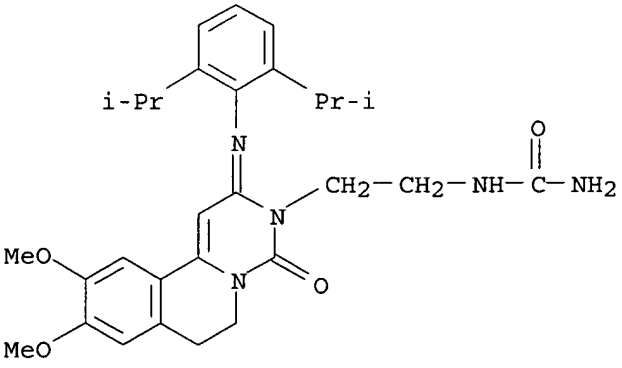
RN 298680-33-8 USPATFULL
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



RN 298680-34-9 USPATFULL
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

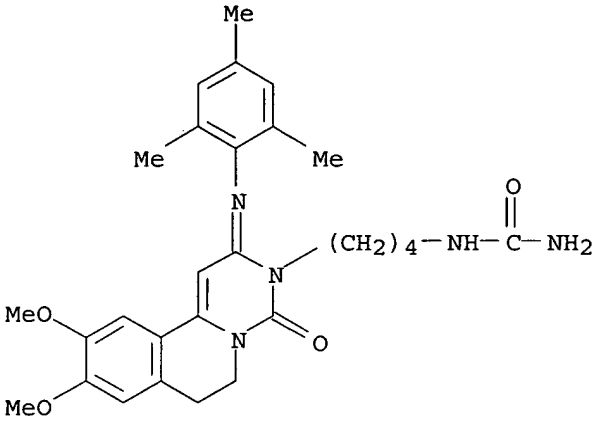


RN 298680-35-0 USPATFULL
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

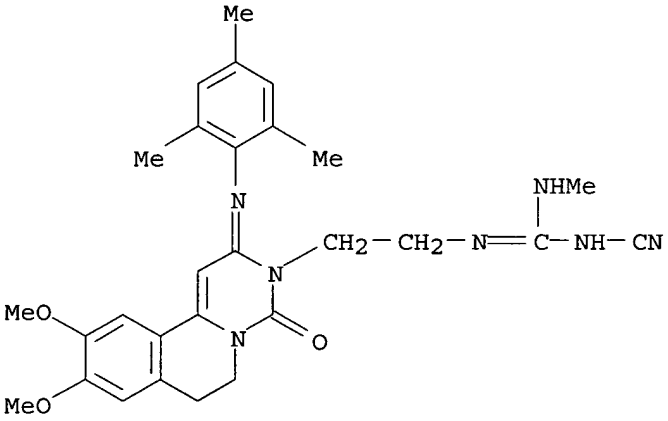


RN 298680-36-1 USPATFULL

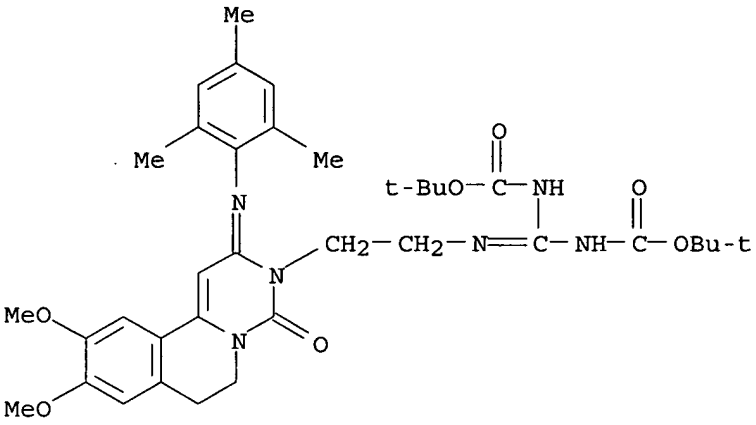
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



RN 298680-37-2 USPATFULL
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)



IT **298680-40-7P**
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 298680-40-7 USPATFULL
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



L21 ANSWER 5 OF 6 USPATFULL on STN

ACCESSION NUMBER:	2004:222055 USPATFULL
TITLE:	Derivatives of pyrimido[6,1-a]isoquinolin-4-one
INVENTOR(S):	Oxford, Alexander William, Royston, UNITED KINGDOM Jack, David, Wheathampstead, UNITED KINGDOM
PATENT ASSIGNEE(S):	Vernalis Limited (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004171828	A1	20040902
APPLICATION INFO.:	US 2004-786650	A1	20040224 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-964260, filed on 26 Sep 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1999-7454	19990331
	GB 1999-9802	19990428

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	Peter F. Corless, EDWARDS & ANGELL, LLP, P.O. Box 9169, Boston, MA, 02209
NUMBER OF CLAIMS:	50
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	5 Drawing Page(s)
LINE COUNT:	1565

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compounds of general formula (I) wherein each of R.sup.1 and R.sup.2 independently represents a C.sub.1-6 alkyl or C.sub.2-7 acyl group; R.sup.5 represents a hydrogen atom or a C.sub.1-3 alkyl, C.sub.2-3 alkenyl or C.sub.2-3 alkynyl group; R.sup.6 represents a hydrogen atom or a C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, amino, C.sub.1-6 alkylamino, di(C.sub.1-6) alkylamino or C.sub.2-7 acylamino group, each of R.sup.7 and R.sup.8 independently represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.2-7 acyl, C.sub.1-6 alkythio, C.sub.1-6 alkoxy, C.sub.3-6 cycloalkyl; and R.sup.9 represents a hydrogen or halogen atom or a hydroxy, trifluoromethyl, C.sub.1-6 alkyl, C.sub.2-6 alkenyl, C.sub.2-6 alkynyl, C.sub.2-7 acyl, C.sub.1-6 alkythio, C.sub.1-6 alkoxy or C.sub.3-6 cycloalkyl group; X represents OCH.sub.2 or a group CR.sup.3R.sup.4, wherein each of R.sup.3 and

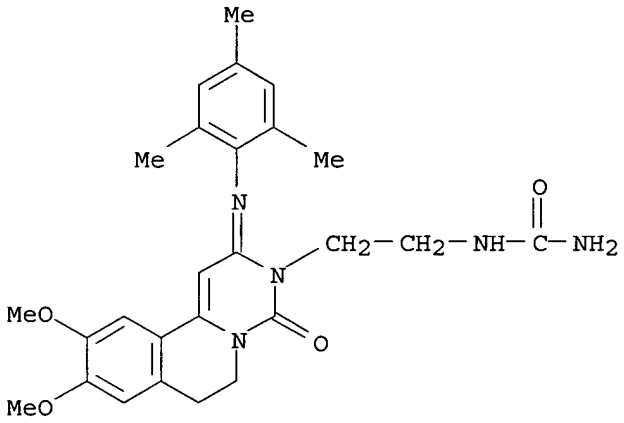
R.sup.4 independently represents a hydrogen atom or a C.sub.1-3 alkyl group; each of R.sup.10 and R.sup.11 independently represents a hydrogen atom, a C.sub.1-3 alkyl, C.sub.3-6 cycloalkyl or phenyl group; y represents an oxygen atom or a group CHNO.sub.2, NCN, NH or NNO.sub.2, n is an integer from 2 to 4; or a salt thereof; are useful for treatment of respiratory disorders such as asthma. Compounds of the invention have a longer duration of action than the known compound trequinsin (9,10-dimethoxy-3-methyl-2-mesitylimino-2,3,6,7-tetrahydro-4H-pyrimido[6,1-a]-isoquinolin-4-one) and do not have trequinsin's very bitter taste. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **298680-25-8P 298680-26-9P 298680-27-0P**
298680-28-1P 298680-29-2P 298680-30-5P
298680-31-6P 298680-32-7P 298680-33-8P
298680-34-9P 298680-35-0P 298680-36-1P
298680-37-2P
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)

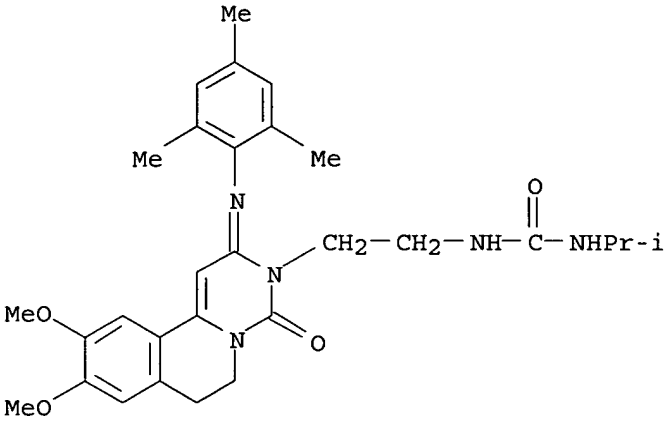
RN 298680-25-8 USPATFULL

CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)

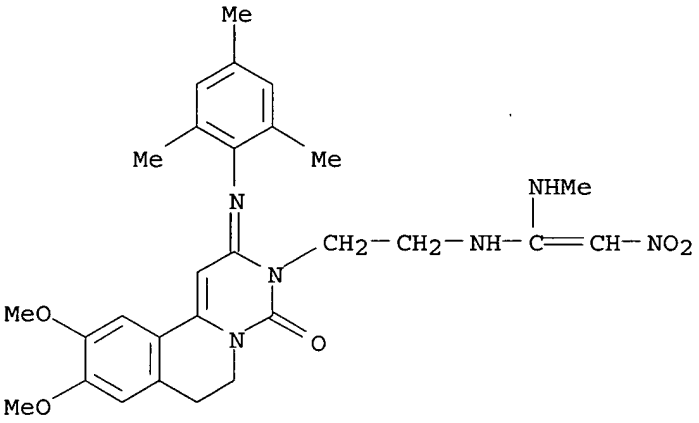


RN 298680-26-9 USPATFULL

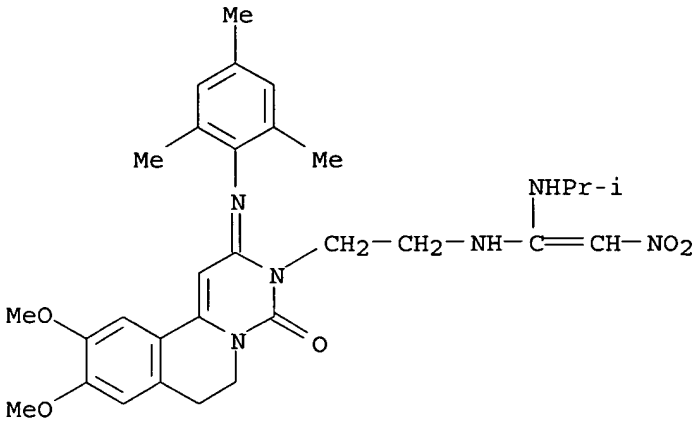
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)



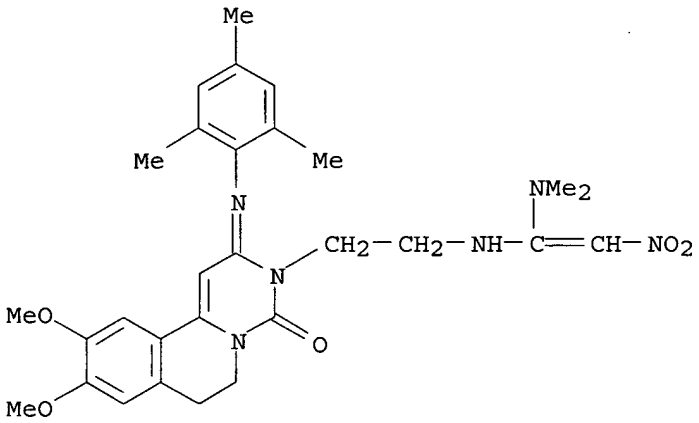
RN 298680-27-0 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-(methylamino)-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



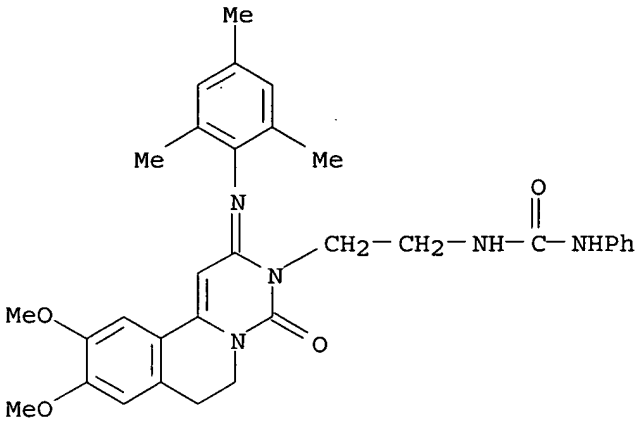
RN 298680-28-1 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 2,3,6,7-tetrahydro-9,10-dimethoxy-3-[2-[[1-[(1-methylethyl)amino]-2-nitroethenyl]amino]ethyl]-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



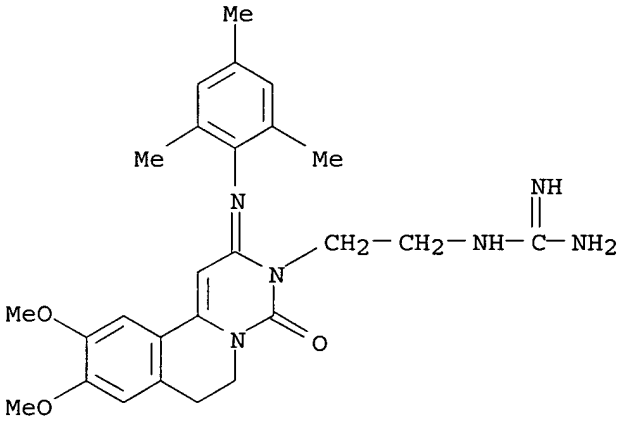
RN 298680-29-2 USPATFULL
CN 4H-Pyrimido[6,1-a]isoquinolin-4-one, 3-[2-[[1-(dimethylamino)-2-nitroethenyl]amino]ethyl]-2,3,6,7-tetrahydro-9,10-dimethoxy-2-[(2,4,6-trimethylphenyl)imino]- (9CI) (CA INDEX NAME)



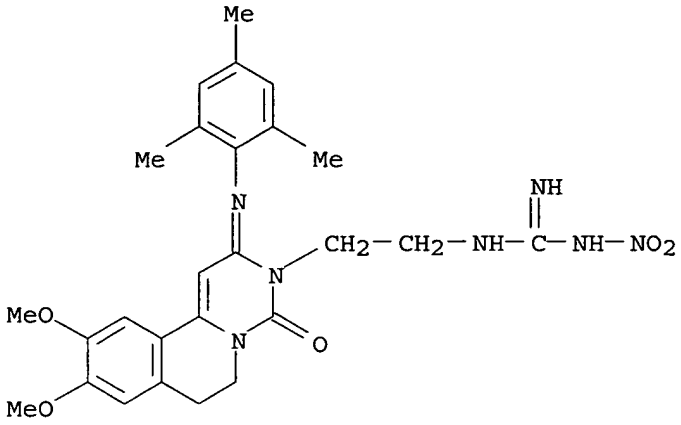
RN 298680-30-5 USPATFULL
CN Urea, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)



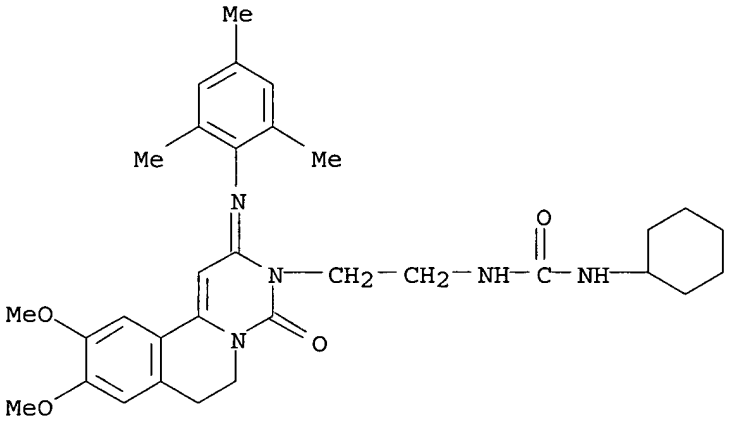
RN 298680-31-6 USPATFULL
CN Guanidine, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-(9CI) (CA INDEX NAME)



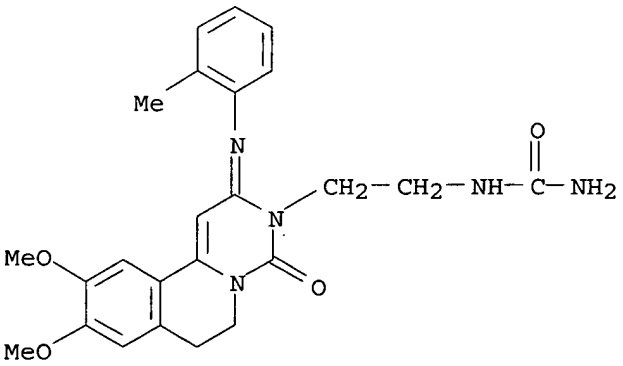
RN 298680-32-7 USPATFULL
CN Guanidine, N-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N'-nitro- (9CI) (CA INDEX NAME)



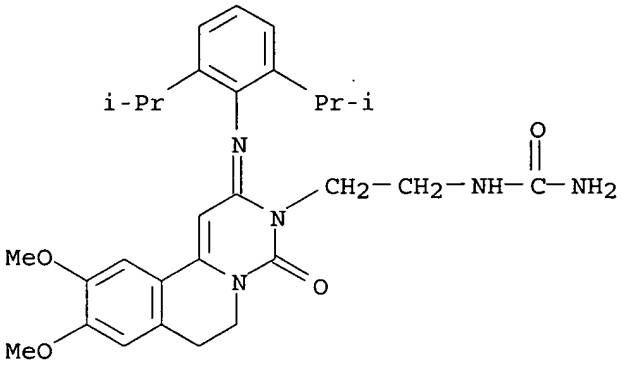
RN 298680-33-8 USPATFULL
CN Urea, N-cyclohexyl-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



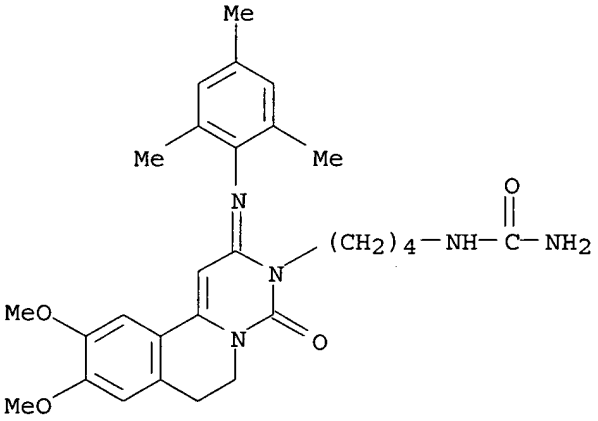
RN 298680-34-9 USPATFULL
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-2-[(2-methylphenyl)imino]-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



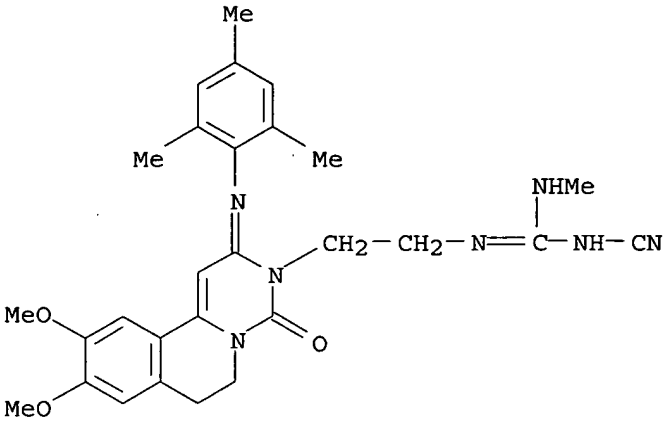
RN 298680-35-0 USPATFULL
CN Urea, [2-[2-[[2,6-bis(1-methylethyl)phenyl]imino]-6,7-dihydro-9,10-dimethoxy-4-oxo-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)



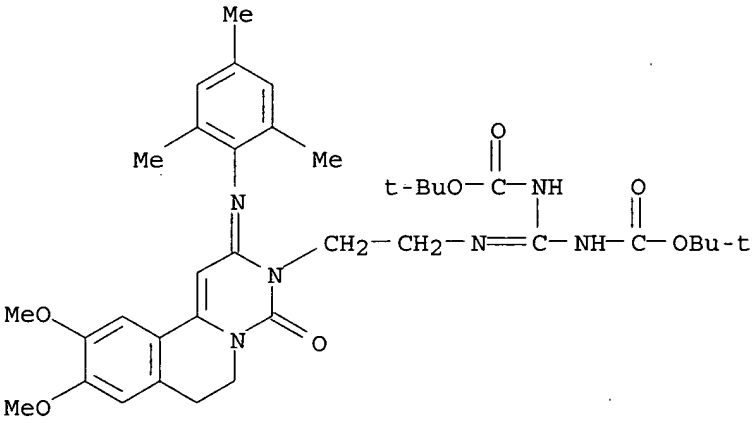
RN 298680-36-1 USPATFULL
CN Urea, [4-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]butyl]- (9CI) (CA INDEX NAME)



RN 298680-37-2 USPATFULL
CN Guanidine, N-cyano-N'-[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]-N''-methyl- (9CI) (CA INDEX NAME)



IT **298680-40-7P**
(preparation of 2-aryliminopyrimido[6,1-a]isoquinolin-4-ones as phosphodiesterase inhibitors)
RN 298680-40-7 USPATFULL
CN Carbamic acid, [[2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]carbonimidoyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



L21 ANSWER 6 OF 6 USPATFULL on STN
ACCESSION NUMBER: 2003:334755 USPATFULL
TITLE: Combination treatment for depression and anxiety
INVENTOR(S): Sobolov-Jaynes, Susan B., Ivoryton, CT, UNITED STATES
Schmidt, Christopher J., Old Lyme, CT, UNITED STATES
PATENT ASSIGNEE(S): Pfizer Inc. (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003235631	A1	20031225	
APPLICATION INFO.:	US 2003-387060	A1	20030312	(10)

	NUMBER	DATE

PRIORITY INFORMATION: US 2002-389181P 20020617 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PFIZER INC, 150 EAST 42ND STREET, 5TH FLOOR - STOP 49, NEW YORK, NY, 10017-5612
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 1308
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of treating depression or anxiety in a mammal, including a human, by administering to the mammal a PDE IV inhibitor in combination with an antidepressant or an anxiolytic agent. It also relates to pharmaceutical compositions containing a pharmaceutically acceptable carrier, a PDE IV inhibitor and an anxiolytic agent or antidepressant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **298680-25-8**
(treatment for depression and anxiety by combination of a PDE IV inhibitor and an antidepressant or an anxiolytic agent)
RN 298680-25-8 USPATFULL
CN Urea, [2-[6,7-dihydro-9,10-dimethoxy-4-oxo-2-[(2,4,6-trimethylphenyl)imino]-2H-pyrimido[6,1-a]isoquinolin-3(4H)-yl]ethyl]- (9CI) (CA INDEX NAME)